

Sequence Listing

<110> Baker, Kevin P.  
Botstein, David  
Desnoyers, Luc  
Eaton, Dan L.  
Ferrara, Napoleone  
Fong, Sherman  
Gao, Wei-Qiang  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, Christopher J.  
Gurney, Austin L.  
Hillan, Kenneth J.  
Pan, James  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Smith, Victoria  
Stewart, Timothy A.  
Tumas, Daniel  
Watanabe, Colin K.  
Williams, P. Mickey  
Wood, William I.

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cctcctcgtc	tctgctttaa	tcaggacacc	gtgaggacaa	gtgaggccgt	2300
cagtcttgg	gtgatgctgg	gtgggctggg	ccgctggagc	ctccgctgc	2350
ttcctccaga	agacacgaat	catgactcac	gattgctgaa	gcctgagcag	2400
gtctctgtgg	gccgaccaga	ggggggcttc	gaggtgggtcc	ctgggtactgg	2450
ggtgaccgag	tggacagccc	aggggtgcagc	tctgcccggg	ctcgtgaagc	2500
ctcagatgtc	cccaatccaa	gggtctggag	gggctgccgt	gactccagag	2550
gcctgaggct	ccagggtctg	ctctggtgtt	tacaagctgg	actcagggat	2600
cctcctggcc	gccccgcagg	gggcttggag	ggctggacgg	caagtccgtc	2650
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ttgattttgct	ctaaccqcaa	2720			

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<210> 12
<211> 699
<212> PRT
<213> Homo sapiens
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```
<220>
<221> TRANSMEM
<222> 21-40 and 84-105
<223> Transmembrane Domain (type II)
```

<400>	12														
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Gln	Ser	Asp	Phe	Leu	Thr	Pro	Pro	Val	Gly	Gly	Ala	Pro	Trp	Ala	
				20					25					30	
Val	Ala	Thr	Thr	Val	Val	Met	Tyr	Pro	Pro	Pro	Pro	Pro	Pro	Pro	
				35					40					45	
His	Arg	Asp	Phe	Ile	Ser	Val	Thr	Leu	Ser	Phe	Gly	Glu	Ser	Tyr	
				50					55					60	
Asp	Asn	Ser	Lys	Ser	Trp	Arg	Arg	Arg	Ser	Cys	Trp	Arg	Lys	Trp	
				65					70					75	
Lys	Gln	Leu	Ser	Arg	Leu	Gln	Arg	Asn	Met	Ile	Leu	Phe	Leu	Leu	
				80					85					90	
Ala	Phe	Leu	Leu	Phe	Cys	Gly	Leu	Leu	Phe	Tyr	Ile	Asn	Leu	Ala	
				95					100					105	

Asp	His	Trp	Lys	Ala 110	Leu	Ala	Phe	Arg	Leu 115	Glu	Glu	Glu	Gln	Lys 120
Met	Arg	Pro	Glu	Ile 125	Ala	Gly	Leu	Lys	Pro 130	Ala	Asn	Pro	Pro	Val 135
Leu	Pro	Ala	Pro	Gln 140	Lys	Ala	Asp	Thr	Asp 145	Pro	Glu	Asn	Leu	Pro 150
Glu	Ile	Ser	Ser	Gln 155	Lys	Thr	Gln	Arg	His 160	Ile	Gln	Arg	Gly	Pro 165
Pro	His	Leu	Gln	Ile 170	Arg	Pro	Pro	Ser	Gln 175	Asp	Leu	Lys	Asp	Gly 180
Thr	Gln	Glu	Glu	Ala 185	Thr	Lys	Arg	Gln	Glu 190	Ala	Pro	Val	Asp	Pro 195
Arg	Pro	Glu	Gly	Asp 200	Pro	Gln	Arg	Thr	Val 205	Ile	Ser	Trp	Arg	Gly 210
Ala	Val	Ile	Glu	Pro 215	Glu	Gln	Gly	Thr	Glu 220	Leu	Pro	Ser	Arg	Arg 225
Ala	Glu	Val	Pro	Thr 230	Lys	Pro	Pro	Leu	Pro 235	Pro	Ala	Arg	Thr	Gln 240
Gly	Thr	Pro	Val	His 245	Leu	Asn	Tyr	Arg	Gln 250	Lys	Gly	Val	Ile	Asp 255
Val	Phe	Leu	His	Ala 260	Trp	Lys	Gly	Tyr	Arg 265	Lys	Phe	Ala	Trp	Gly 270
His	Asp	Glu	Leu	Lys 275	Pro	Val	Ser	Arg	Ser 280	Phe	Ser	Glu	Trp	Phe 285
Gly	Leu	Gly	Leu	Thr 290	Leu	Ile	Asp	Ala	Leu 295	Asp	Thr	Met	Trp	Ile 300
Leu	Gly	Leu	Arg	Lys 305	Glu	Phe	Glu	Glu	Ala 310	Arg	Lys	Trp	Val	Ser 315
Lys	Lys	Leu	His	Phe 320	Glu	Lys	Asp	Val	Asp 325	Val	Asn	Leu	Phe	Glu 330
Ser	Thr	Ile	Arg	Ile 335	Leu	Gly	Gly	Leu	Leu 340	Ser	Ala	Tyr	His	Leu 345
Ser	Gly	Asp	Ser	Leu 350	Phe	Leu	Arg	Lys	Ala 355	Glu	Asp	Phe	Gly	Asn 360
Arg	Leu	Met	Pro	Ala 365	Phe	Arg	Thr	Pro	Ser 370	Lys	Ile	Pro	Tyr	Ser 375
Asp	Val	Asn	Ile	Gly 380	Thr	Gly	Val	Ala	His 385	Pro	Pro	Arg	Trp	Thr 390
Ser	Asp	Ser	Thr	Val	Ala	Glu	Val	Thr	Ser	Ile	Gln	Leu	Glu	Phe

395										400					405				
Arg	Glu	Leu	Ser	Arg	Leu	Thr	Gly	Asp	Lys	Lys	Phe	Gln	Glu	Ala					
				410					415					420					
Val	Glu	Lys	Val	Thr	Gln	His	Ile	His	Gly	Leu	Ser	Gly	Lys	Lys					
				425					430					435					
Asp	Gly	Leu	Val	Pro	Met	Phe	Ile	Asn	Thr	His	Ser	Gly	Leu	Phe					
				440					445					450					
Thr	His	Leu	Gly	Val	Phe	Thr	Leu	Gly	Ala	Arg	Ala	Asp	Ser	Tyr					
				455					460					465					
Tyr	Glu	Tyr	Leu	Leu	Lys	Gln	Trp	Ile	Gln	Gly	Gly	Lys	Gln	Glu					
				470					475					480					
Thr	Gln	Leu	Leu	Glu	Asp	Tyr	Val	Glu	Ala	Ile	Glu	Gly	Val	Arg					
				485					490					495					
Thr	His	Leu	Leu	Arg	His	Ser	Glu	Pro	Ser	Lys	Leu	Thr	Phe	Val					
				500					505					510					
Gly	Glu	Leu	Ala	His	Gly	Arg	Phe	Ser	Ala	Lys	Met	Asp	His	Leu					
				515					520					525					
Val	Cys	Phe	Leu	Pro	Gly	Thr	Leu	Ala	Leu	Gly	Val	Tyr	His	Gly					
				530					535					540					
Leu	Pro	Ala	Ser	His	Met	Glu	Leu	Ala	Gln	Glu	Leu	Met	Glu	Thr					
				545					550					555					
Cys	Tyr	Gln	Met	Asn	Arg	Gln	Met	Glu	Thr	Gly	Leu	Ser	Pro	Glu					
				560					565					570					
Ile	Val	His	Phe	Asn	Leu	Tyr	Pro	Gln	Pro	Gly	Arg	Arg	Asp	Val					
				575					580					585					
Glu	Val	Lys	Pro	Ala	Asp	Arg	His	Asn	Leu	Leu	Arg	Pro	Glu	Thr					
				590					595					600					
Val	Glu	Ser	Leu	Phe	Tyr	Leu	Tyr	Arg	Val	Thr	Gly	Asp	Arg	Lys					
				605					610					615					
Tyr	Gln	Asp	Trp	Gly	Trp	Glu	Ile	Leu	Gln	Ser	Phe	Ser	Arg	Phe					
				620					625					630					
Thr	Arg	Val	Pro	Ser	Gly	Gly	Tyr	Ser	Ser	Ile	Asn	Asn	Val	Gln					
				635					640					645					
Asp	Pro	Gln	Lys	Pro	Glu	Pro	Arg	Asp	Lys	Met	Glu	Ser	Phe	Phe					
				650					655					660					
Leu	Gly	Glu	Thr	Leu	Lys	Tyr	Leu	Phe	Leu	Leu	Phe	Ser	Asp	Asp					
				665					670					675					
Pro	Asn	Leu	Leu	Ser	Leu	Asp	Ala	Tyr	Val	Phe	Asn	Thr	Glu	Ala					
				680					685					690					

His Pro Leu Pro Ile Trp Thr Pro Ala  
695

```
<210> 13
<211> 24
<212> DNA
<213> Artificial
```

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

```
<400> 13
cgccagaagg gcgtgattga cgtc 24
```

```
<210> 14
<211> 24
<212> DNA
<213> Artificial
```

```
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
```

```
<400> 14
ccatccttct tcccagacag gccg 24
```

```
<210> 15
<211> 44
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-44  
<223> Synthetic construct.
```

```
<400> 15
gaagcctgtg tccaggtcct tcagtgagtg gtttggcctc ggtc 44
```

```
<210> 16
<211> 1524
<212> DNA
<213> Homo sapiens
```

```
<400> 16
ggcgccgcgt aggcccgga ggccgggccc gccgggctgc gagcgctgc 50
cccatgcgcc gccgcctctc cgcacgatgt tccctcgcg gaggaagcg 100
gcgcagctgc cctgggagga cggcaggtcc gggttgctct ccggcgccct 150
ccctcggaag tgttcgtct tccacctgtt cgtggcctgc ctctcgctgg 200
gcttcttctc cctactctgg ctgcagctca gctgctctgg ggacgtggcc 250
```

cgggcagtca ggggacaagg gcaggagacc tcgggccctc cccgtgcctg 300  
 cccccagag ccgccccctg agcactggga agaagacgca tcctggggcc 350  
 cccaccgcct ggagtgctg gtgcccttcc gcgaacgctt cgaggagctc 400  
 ctggtcttcg tgccccacat gcgccgcttc ctgagcagga agaagatccg 450  
 gcaccacatc tacgtgctca accagggtgga ccacttcagg ttcaaccggg 500  
 cagcgctcat caacgtgggc ttcttgaga gcagcaacag cacggactac 550  
 attgccatgc acgacgttga cctgctccct ctcaacgagg agctggacta 600  
 tggctttcct gaggtgggc ccttccacgt ggcctccccg gagctccacc 650  
 ctctctacca ctacaagacc tatgtcggcg gcctcctgct gctctccaag 700  
 cagcactacc ggctgtgcaa tgggatgtcc aaccgcttct ggggctgggg 750  
 ccgcgaggac gacgagttct accggcgcat taaggagct gggctccagc 800  
 ttttccgcc ctcggaatc acaactgggt acaagacatt tcgccacctg 850  
 catgaccag cctggcgga gagggaccag aagcgcatcg cagctcaaaa 900  
 acaggagcag ttcaagggtg acaggaggag aggcctgaac actgtgaagt 950  
 accatgtggc ttcccgact gccctgtctg tgggcggggc ccctgcact 1000  
 gtctcaaca tcatgttgga ctgtgacaag accgccacac cctggtgcac 1050  
 attcagctga gctggatgga cagtaggaa gcctgtacct acaggccata 1100  
 ttgctcaggc tcaggacaag gcctcaggtc gtgggccag ctctgacagg 1150  
 atgtggagtg gccaggacca agacagcaag ctacgcaatt gcagccaccc 1200  
 ggccgccaag gcaggcttg gctgggccag gacacgtggg gtgcctggga 1250  
 cgctgcttgc catgcacagt gatcagagag aggcctgggt gtgtcctgtc 1300  
 cgggaccccc cctgccttcc tgctcaccct actctgacct ccttcacgtg 1350  
 cccaggcctg tgggtagtgg ggagggtga acaggacaac ctctcatcac 1400  
 cctactctga cctccttcac gtgcccaggc ctgtgggtag tggggagggc 1450  
 tgaacaggac aacctctcat ccccccaaa aaaaaaaaaa aaaaaaaaaa 1500  
 aaaaaaaaaa aaaaaaaaaa aaaa 1524

<210> 17  
 <211> 327  
 <212> PRT  
 <213> Homo sapiens  
 <220>

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<221> sig_peptide
<222> 1-42
<223> Signal peptide.

<220>
<221> misc_feature
<222> 19-25,65-71,247-253,285-291,303-310
<223> N-myristoylation site.

<220>
<221> misc_feature
<222> 27-31
<223> cAMP- and cGMP-dependent protein kinase phosphorylation site.

<220>
<221> TRANSMEM
<222> 29-49
<223> Transmembrane domain (type II).

<220>
<221> misc_feature
<222> 154-158
<223> N-glycosylation site.

<220>
<221> misc_feature
<222> 226-233
<223> Tyrosine kinase phosphorylation site.

<400> 17
Met Phe Pro Ser Arg Arg Lys Ala Ala Gln Leu Pro Trp Glu Asp
 1             5             10             15
Gly Arg Ser Gly Leu Leu Ser Gly Gly Leu Pro Arg Lys Cys Ser
          20             25             30
Val Phe His Leu Phe Val Ala Cys Leu Ser Leu Gly Phe Phe Ser
          35             40             45
Leu Leu Trp Leu Gln Leu Ser Cys Ser Gly Asp Val Ala Arg Ala
          50             55             60
Val Arg Gly Gln Gly Gln Glu Thr Ser Gly Pro Pro Arg Ala Cys
          65             70             75
Pro Pro Glu Pro Pro Pro Glu His Trp Glu Glu Asp Ala Ser Trp
          80             85             90
Gly Pro His Arg Leu Ala Val Leu Val Pro Phe Arg Glu Arg Phe
          95             100             105
Glu Glu Leu Leu Val Phe Val Pro His Met Arg Arg Phe Leu Ser
          110             115             120
Arg Lys Lys Ile Arg His His Ile Tyr Val Leu Asn Gln Val Asp
          125             130             135
His Phe Arg Phe Asn Arg Ala Ala Leu Ile Asn Val Gly Phe Leu

```



140	145	150
Glu Ser Ser Asn Ser Thr Asp Tyr Ile	Ala Met His Asp Val Asp	
155	160	165
Leu Leu Pro Leu Asn Glu Glu Leu Asp	Tyr Gly Phe Pro Glu Ala	
170	175	180
Gly Pro Phe His Val Ala Ser Pro Glu	Leu His Pro Leu Tyr His	
185	190	195
Tyr Lys Thr Tyr Val Gly Gly Ile Leu	Leu Leu Ser Lys Gln His	
200	205	210
Tyr Arg Leu Cys Asn Gly Met Ser Asn	Arg Phe Trp Gly Trp Gly	
215	220	225
Arg Glu Asp Asp Glu Phe Tyr Arg Arg	Ile Lys Gly Ala Gly Leu	
230	235	240
Gln Leu Phe Arg Pro Ser Gly Ile Thr	Thr Gly Tyr Lys Thr Phe	
245	250	255
Arg His Leu His Asp Pro Ala Trp Arg	Lys Arg Asp Gln Lys Arg	
260	265	270
Ile Ala Ala Gln Lys Gln Glu Gln Phe	Lys Val Asp Arg Glu Gly	
275	280	285
Gly Leu Asn Thr Val Lys Tyr His Val	Ala Ser Arg Thr Ala Leu	
290	295	300
Ser Val Gly Gly Ala Pro Cys Thr Val	Leu Asn Ile Met Leu Asp	
305	310	315
Cys Asp Lys Thr Ala Thr Pro Trp Cys	Thr Phe Ser	
320	325	

<210> 18  
 <211> 23  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-23  
 <223> Synthetic construct.

<400> 18  
 gcgaacgctt cgaggagtcc tgg 23

<210> 19  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence

<222> 1-24  
<223> Synthetic construct

<400> 19  
gcagtgcggg aagccacatg gtac 24

<210> 20  
<211> 46  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-46  
<223> Synthetic construct.

<400> 20  
cttcctgagc aggaagaaga tccggcacca catctacgtg ctcaac 46

<210> 21  
<211> 494  
<212> DNA  
<213> Homo sapiens

<400> 21  
caatgtttgc ctatccacct cccccaagcc cctttaccta tgctgctgct 50  
aacgctgctg ctgctgctgc tgctgcttaa aggctcatgc ttggagtggg 100  
gactggctcg tgcccagaaa gtctcttctg ccactgacgc ccccatcagg 150  
gattgggcct tctttccccc ttcctttctg tgtctcctgc ctcatcggcc 200  
tgccatgacc tgcagccaag cccagccccg tggggaaggg gagaaagtgg 250  
gggatggcta agaaagctgg gagatagggg acagaagagg gtagtgggtg 300  
ggctaggggg gctgccttat ttaaagtggg tgtttatgat tcttatacta 350  
atttatacaa agatattaag gccctgttca ttaagaaatt gttcccttcc 400  
cctgtgttca atgtttgtaa agattgttct gtgtaaatat gtctttataa 450  
taaacagtta aaagctgaaa aaaaaaaaaa aaaaaaaaaa aaaa 494

<210> 22  
<211> 73  
<212> PRT  
<213> Homo sapiens

<220>  
<221> sig\_peptide  
<222> 1-15  
<223> Signal peptide.

<220>  
<221> misc\_feature  
<222> 3-18

<223> Growth factor and cytokines receptors family.

<400> 22

```

Met Leu Leu Leu Thr Leu Leu Leu Leu Leu Leu Leu Lys Gly
 1          5          10          15
Ser Cys Leu Glu Trp Gly Leu Val Gly Ala Gln Lys Val Ser Ser
          20          25          30
Ala Thr Asp Ala Pro Ile Arg Asp Trp Ala Phe Phe Pro Pro Ser
          35          40          45
Phe Leu Cys Leu Leu Pro His Arg Pro Ala Met Thr Cys Ser Gln
          50          55          60
Ala Gln Pro Arg Gly Glu Gly Glu Lys Val Gly Asp Gly
          65          70

```

<210> 23

<211> 2883

<212> DNA

<213> Homo sapiens

<400> 23

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gggacccatg cggccgtgac ccccggctcc ctagaggccc agcgcagccg 50
cagcggacaa aggagcatgt ccgcgccggg gaaggcccg cctccggccg 100
ccataaggct ccggtcgccg ctgggcccgc gccgcgctcc tgcccgcgcg 150
ggctccgggg cggcccgcta ggccagtgcg ccgccgctcg ccccgagggc 200
cccggcccgc agcatggagc caccgggacg ccggcggggc cgcgcgcagc 250
cgccgctgtt gctgccgctc tcgctgttag cgctgctcgc gctgctggga 300
ggcggcgggc gcggcggcgc cgcggcgctg cccgccggct gcaagcacga 350
tgggcgggcc cgaggggctg gcagggcggc gggcgccgcc gagggcaagg 400
tggtgtgcag cagcctggaa ctgcgcgagg tcctgcccc agatactctg 450
cccaaccgca cggtcaccct gattctgagt aacaataaga tatccgagct 500
gaagaatggc tcattttctg ggttaagtct ccttgaaaga ttggacctcc 550
gaaacaatct tattagtagt atagatccag gtgccttctg gggactgtca 600
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atgtgttttc ttcattatct caaggaactt ttgattatct tgcgtcatta 750
cgggtctttg aattccagac tgagtatctt ttgtgtgact gtaacatact 800
gtggatgcat cgctgggtaa aggagaagaa catcacggtg cgggatacca 850

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ggtgtgttta tcctaagtca ctgcaggccc aaccagtcac aggcgtgaag 900  
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 gactccatct catcgccaag ttgtgtttga aggagacagc cttcctttcc 1000  
 agtgcacggc ttcatatatt gatcaggaca tgcaagtgtt gtggtatcag 1050  
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 atattcaggc tggatctact ggaaattggg gctgtcatgt ccagaccaa 1200  
 cgtgggaata atacgaggac tgtggatatt gtggtattag agagtctctgc 1250  
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 ctatttacag ttaaattaga atgctccaaa tgttctgctt cgcaaaataa 2100  
 ccttattaaa agattttttt ttgcaggaag ataggtatta ttgcttttgc 2150  
 tactgtttta aagaaaacta accaggaaga actgcattac gactttcaag 2200  
 ggccctaggc atttttgcct ttgattccct ttcttcacat aaaaatatca 2250  
 gaaattacat ttataactg cagtgggtata aatgcaaata tactattgtt 2300

acatgtgaaa	aaatttttatt	tgacttaaaa	gtttatttat	ttgttttttt	2350
gctcctgatt	ttaagacaat	aagatgtttt	catgggcccc	taaaagtatc	2400
atgagccttt	ggcactgcgc	ctgccaagcc	tagtggagaa	gtcaaccctg	2450
agaccaggtg	tttaatcaag	caagctgtat	atcaaaat	ttggcagaaa	2500
acacaaatat	gtcatatatc	tttttttaaa	aaaagtattt	cattgaagca	2550
agcaaaatga	aagcattttt	actgattttt	aaaattggtg	ctttagatat	2600
atttgactac	actgtattga	agcaaataga	ggaggcacaa	ctccagcacc	2650
ctaattggaac	cacatttttt	tcacttagct	ttctgtgggc	atgtgttaatt	2700
gtattctctg	cggtttttaa	tctcacagta	ctttatttct	gtcttgtccc	2750
tcaataatat	cacaaacaat	attccagtca	ttttaatggc	tgcataataa	2800
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tattgaatga	atgaacgaaa	aaaaaaaaaa	aaa	2883	

```
<210> 24
<211> 616
<212> PRT
<213> Homo sapiens
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<220>
<221> sig_peptide
<222> 1-33
<223> Signal peptide.
```

```
<220>
<221> TRANSMEM
<222> 13-40
<223> Transmembrane domain (type II).
```

```

<400> 24
Met  Glu  Pro  Pro  Gly  Arg  Arg  Arg  Gly  Arg  Ala  Gln  Pro  Pro  Leu
   1          5          10          15

Leu  Leu  Pro  Leu  Ser  Leu  Leu  Ala  Leu  Leu  Ala  Leu  Leu  Gly  Gly
   20          25          30

Gly  Gly  Gly  Gly  Gly  Ala  Ala  Ala  Leu  Pro  Ala  Gly  Cys  Lys  His
   35          40          45

Asp  Gly  Arg  Pro  Arg  Gly  Ala  Gly  Arg  Ala  Ala  Gly  Ala  Ala  Glu
   50          55          60

Gly  Lys  Val  Val  Cys  Ser  Ser  Leu  Glu  Leu  Ala  Gln  Val  Leu  Pro
   65          70          75

Pro  Asp  Thr  Leu  Pro  Asn  Arg  Thr  Val  Thr  Leu  Ile  Leu  Ser  Asn
   80          85          90

```

Asn Lys Ile Ser Glu Leu Lys Asn Gly Ser Phe Ser Gly Leu Ser  
95 100 105

Leu Leu Glu Arg Leu Asp Leu Arg Asn Asn Leu Ile Ser Ser Ile  
110 115 120

Asp Pro Gly Ala Phe Trp Gly Leu Ser Ser Leu Lys Arg Leu Asp  
125 130 135

Leu Thr Asn Asn Arg Ile Gly Cys Leu Asn Ala Asp Ile Phe Arg  
140 145 150

Gly Leu Thr Asn Leu Val Arg Leu Asn Leu Ser Gly Asn Leu Phe  
155 160 165

Ser Ser Leu Ser Gln Gly Thr Phe Asp Tyr Leu Ala Ser Leu Arg  
170 175 180

Ser Leu Glu Phe Gln Thr Glu Tyr Leu Leu Cys Asp Cys Asn Ile  
185 190 195

Leu Trp Met His Arg Trp Val Lys Glu Lys Asn Ile Thr Val Arg  
200 205 210

Asp Thr Arg Cys Val Tyr Pro Lys Ser Leu Gln Ala Gln Pro Val  
215 220 225

Thr Gly Val Lys Gln Glu Leu Leu Thr Cys Asp Pro Pro Leu Glu  
230 235 240

Leu Pro Ser Phe Tyr Met Thr Pro Ser His Arg Gln Val Val Phe  
245 250 255

Glu Gly Asp Ser Leu Pro Phe Gln Cys Met Ala Ser Tyr Ile Asp  
260 265 270

Gln Asp Met Gln Val Leu Trp Tyr Gln Asp Gly Arg Ile Val Glu  
275 280 285

Thr Asp Glu Ser Gln Gly Ile Phe Val Glu Lys Asn Met Ile His  
290 295 300

Asn Cys Ser Leu Ile Ala Ser Ala Leu Thr Ile Ser Asn Ile Gln  
305 310 315

Ala Gly Ser Thr Gly Asn Trp Gly Cys His Val Gln Thr Lys Arg  
320 325 330

Gly Asn Asn Thr Arg Thr Val Asp Ile Val Val Leu Glu Ser Ser  
335 340 345

Ala Gln Tyr Cys Pro Pro Glu Arg Val Val Asn Asn Lys Gly Asp  
350 355 360

Phe Arg Trp Pro Arg Thr Leu Ala Gly Ile Thr Ala Tyr Leu Gln  
365 370 375

Cys Thr Arg Asn Thr His Gly Ser Gly Ile Tyr Pro Gly Asn Pro

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Trp	Ala	Asp	Asp	Asp	Tyr	Ser	Arg	Cys	Gln	Tyr	Ala	Asn	Asp	Val															
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Asn	Ala	Val	Ala	Thr	Ala	Arg	Gln	Leu	Leu	Ala	Tyr	Thr	Val	Glu															
				440					445					450															
Ala	Ala	Asn	Phe	Ser	Asp	Lys	Met	Asp	Val	Ile	Phe	Val	Ala	Glu															
				455					460					465															
Met	Ile	Glu	Lys	Phe	Gly	Arg	Phe	Thr	Lys	Glu	Glu	Lys	Ser	Lys															
				470					475					480															
Glu	Leu	Gly	Asp	Val	Met	Val	Asp	Ile	Ala	Ser	Asn	Ile	Met	Leu															
				485					490					495															
Ala	Asp	Glu	Arg	Val	Leu	Trp	Leu	Ala	Gln	Arg	Glu	Ala	Lys	Ala															
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Cys	Ser	Arg	Ile	Val	Gln	Cys	Leu	Gln	Arg	Ile	Ala	Thr	Tyr	Arg															
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Leu	Ala	Gly	Gly	Ala	His	Val	Tyr	Ser	Thr	Tyr	Ser	Pro	Asn	Ile															
				530					535					540															
Ala	Leu	Glu	Ala	Tyr	Val	Ile	Lys	Ser	Thr	Gly	Phe	Thr	Gly	Met															
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Thr	Cys	Thr	Val	Phe	Gln	Lys	Val	Ala	Ala	Ser	Asp	Arg	Thr	Gly															
				560					565					570															
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Gln	Leu	Ser	Phe	Lys	Cys	Asn	Val	Ser	Asn	Thr	Phe	Ser	Ser	Leu															
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<212> DNA  
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gcagaggctt cgtgacggag ttatcagaga cattgagagg caaattcgga 150  
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tgtccagtgc ttagggttgt tactgagaag cactgccgag cttgtgagaa 550



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<211> 81  
<212> PRT  
<213> Homo sapiens  
  
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<222> 1-21  
<223> Signal peptide.

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Thr Ala Ala Thr Val Ala Gly Val His Val Lys Gln Gln Trp Asp  
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Gln Gln Arg Leu Arg Asp Gly Val Ile Arg Asp Ile Glu Arg Gln  
35 40 45  
Ile Arg Lys Lys Glu Asn Ile Arg Leu Leu Gly Glu Gln Ile Ile  
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Lys Gly Ser Gln Lys Ser  
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<211> 2128  
<212> DNA  
<213> Homo sapiens

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36

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<211> 322
<212> PRT
<213> Homo sapiens
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<400> 31

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Ala	Leu	Thr	Gln	Pro 35	Leu	Gly	Leu	Leu	Arg 40	Leu	Leu	Gln	Leu	Val 45
Ser	Thr	Cys	Val	Ala 50	Phe	Ser	Leu	Val	Ala 55	Ser	Val	Gly	Ala	Trp 60
Thr	Gly	Ser	Met	Gly 65	Asn	Trp	Ser	Met	Phe 70	Thr	Trp	Cys	Phe	Cys 75
Phe	Ser	Val	Thr	Leu 80	Ile	Ile	Leu	Ile	Val 85	Glu	Leu	Cys	Gly	Leu 90
Gln	Ala	Arg	Phe	Pro 95	Leu	Ser	Trp	Arg	Asn 100	Phe	Pro	Ile	Thr	Phe 105
Ala	Cys	Tyr	Ala	Ala 110	Leu	Phe	Cys	Leu	Ser 115	Ala	Ser	Ile	Ile	Tyr 120
Pro	Thr	Thr	Tyr	Val 125	Gln	Phe	Leu	Ser	His 130	Gly	Arg	Ser	Arg	Asp 135
His	Ala	Ile	Ala	Ala 140	Thr	Phe	Phe	Ser	Cys 145	Ile	Ala	Cys	Val	Ala 150
Tyr	Ala	Thr	Glu	Val 155	Ala	Trp	Thr	Arg	Ala 160	Arg	Pro	Gly	Glu	Ile 165
Thr	Gly	Tyr	Met	Ala 170	Thr	Val	Pro	Gly	Leu 175	Leu	Lys	Val	Leu	Glu 180
Thr	Phe	Val	Ala	Cys 185	Ile	Ile	Phe	Ala	Phe 190	Ile	Ser	Asp	Pro	Asn 195
Leu	Tyr	Gln	His	Gln 200	Pro	Ala	Leu	Glu	Trp 205	Cys	Val	Ala	Val	Tyr 210

Ala Ile Cys Phe Ile Leu Ala Ala Ile Ala Ile Leu Leu Asn Leu  
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230 235 240  
Ser Gly Leu Ala Leu Leu Ser Val Leu Leu Tyr Ala Thr Ala Leu  
245 250 255  
Val Leu Trp Pro Leu Tyr Gln Phe Asp Glu Lys Tyr Gly Gly Gln  
260 265 270  
Pro Arg Arg Ser Arg Asp Val Ser Cys Ser Arg Ser His Ala Tyr  
275 280 285  
Tyr Val Cys Ala Trp Asp Arg Arg Leu Ala Val Ala Ile Leu Thr  
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<210> 32  
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<212> DNA  
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<211> 335

<212> PRT

<213> Homo sapiens

<400> 33

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Ser	Leu	Ala	Gln	Val	Asn	Leu	Ser	Pro	Phe	Ser	His	Pro	Lys	Val	35	40	45	
His	Met	Asp	Pro	Asn	Tyr	Cys	His	Pro	Ser	Thr	Ser	Leu	His	Leu	50	55	60	
Cys	Ser	Leu	Ala	Trp	Ser	Phe	Thr	Arg	Leu	Leu	His	Pro	Pro	Leu	65	70	75	
Ser	Pro	Gly	Ile	Ser	Gln	Val	Val	Lys	Asp	His	Val	Thr	Lys	Pro	80	85	90	
Thr	Ala	Met	Ala	Gln	Gly	Arg	Val	Ala	His	Leu	Ile	Glu	Trp	Lys	95	100	105	
Gly	Trp	Ser	Lys	Pro	Ser	Asp	Ser	Pro	Ala	Ala	Leu	Glu	Ser	Ala	110	115	120	
Phe	Ser	Ser	Tyr	Ser	Asp	Leu	Ser	Glu	Gly	Glu	Gln	Glu	Ala	Arg	125	130	135	
Phe	Ala	Ala	Gly	Val	Ala	Glu	Gln	Phe	Ala	Ile	Ala	Glu	Ala	Lys	140	145	150	
Leu	Arg	Ala	Trp	Ser	Ser	Val	Asp	Gly	Glu	Asp	Ser	Thr	Asp	Asp	155	160	165	
Ser	Tyr	Asp	Glu	Asp	Phe	Ala	Gly	Gly	Met	Asp	Thr	Asp	Met	Ala	170	175	180	
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His	Arg	Phe	Ser	Arg	Pro	Val	Arg	Gln	Gly	Ser	Val	Glu	Pro	Glu	200	205	210	
Ser	Asp	Cys	Ser	Gln	Thr	Val	Ser	Pro	Asp	Thr	Leu	Cys	Ser	Ser	215	220	225	
Leu	Cys	Ser	Leu	Glu	Asp	Gly	Leu	Leu	Gly	Ser	Pro	Ala	Arg	Leu	230	235	240	

Ala Ser Gln Leu Leu Gly Asp Glu Leu Leu Leu Ala Lys Leu Pro  
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Pro Ser Arg Glu Ser Ala Phe Arg Ser Leu Gly Pro Leu Glu Ala  
260 265 270  
Gln Asp Ser Leu Tyr Asn Ser Pro Leu Thr Glu Ser Cys Leu Ser  
275 280 285  
Pro Ala Glu Glu Glu Pro Ala Pro Cys Lys Asp Cys Gln Pro Leu  
290 295 300  
Cys Pro Pro Leu Thr Gly Ser Trp Glu Arg Gln Arg Gln Ala Ser  
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<223> Synthetic construct

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<220>  
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<223> Synthetic construct.

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<223> Synthetic construct.

<400> 36



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 <223> Synthetic construct.

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<400> 39  
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<210> 40  
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gcccaactgag	ttatgaagct	gacaatgact	gcattcaacg	gggccatggc	1950
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aagggttttg	gaattttaac	ttgtcttaat	atatcttagg	cttcaattat	2050
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<210> 41
<211> 334
<212> PRT
<213> Homo sapiens
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<400>	41													
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Ser	Leu	Leu	Ser	Gly	Ser	His	Gly	Lys	Glu	Asn	Gln	Asp	Ile	Asn
				20					25					30
Thr	Thr	Gln	Asn	Ile	Ala	Glu	Val	Phe	Lys	Thr	Met	Glu	Asn	Lys
				35					40					45
Pro	Ile	Ser	Leu	Glu	Ser	Glu	Ala	Asn	Leu	Asn	Ser	Asp	Lys	Glu
				50					55					60
Asn	Ile	Thr	Thr	Ser	Asn	Leu	Lys	Ala	Ser	His	Ser	Pro	Pro	Leu
				65					70					75
Asn	Leu	Pro	Asn	Asn	Ser	His	Gly	Ile	Thr	Asp	Phe	Ser	Ser	Asn
				80					85					90
Ser	Ser	Ala	Glu	His	Ser	Leu	Gly	Ser	Leu	Lys	Pro	Thr	Ser	Thr
				95					100					105
Ile	Ser	Thr	Ser	Pro	Pro	Leu	Ile	His	Ser	Phe	Val	Ser	Lys	Val
				110					115					120
Pro	Trp	Asn	Ala	Pro	Ile	Ala	Asp	Glu	Asp	Leu	Leu	Pro	Ile	Ser
				125					130					135
Ala	His	Pro	Asn	Ala	Thr	Pro	Ala	Leu	Ser	Ser	Glu	Asn	Phe	Thr
				140					145					150
Trp	Ser	Leu	Val	Asn	Asp	Thr	Val	Lys	Thr	Pro	Asp	Asn	Ser	Ser
				155					160					165
Ile	Thr	Val	Ser	Ile	Leu	Ser	Ser	Glu	Pro	Thr	Ser	Pro	Ser	Val
				170					175					180
Thr	Pro	Leu	Ile	Val	Glu	Pro	Ser	Gly	Trp	Leu	Thr	Thr	Asn	Ser
				185					190					195

Asp Ser Phe Thr Gly Phe Thr Pro Tyr Gln Glu Lys Thr Thr Leu  
200 205 210

Gln Pro Thr Leu Lys Phe Thr Asn Asn Ser Lys Leu Phe Pro Asn  
215 220 225

Thr Ser Asp Pro Gln Lys Glu Asn Arg Asn Thr Gly Ile Val Phe  
230 235 240

Gly Ala Ile Leu Gly Ala Ile Leu Gly Val Ser Leu Leu Thr Leu  
245 250 255

Val Gly Tyr Leu Leu Cys Gly Lys Arg Lys Thr Asp Ser Phe Ser  
260 265 270

His Arg Arg Leu Tyr Asp Asp Arg Asn Glu Pro Val Leu Arg Leu  
275 280 285

Asp Asn Ala Pro Glu Pro Tyr Asp Val Ser Phe Gly Asn Ser Ser  
290 295 300

Tyr Tyr Asn Pro Thr Leu Asn Asp Ser Ala Met Pro Glu Ser Glu  
305 310 315

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320 325 330

Arg Thr Ser Val

<210> 42  
<211> 1594  
<212> DNA  
<213> Homo sapiens

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ctgagccgca cggtcagaac tcagatactg accggcaagg agctccgagt 200  
tgccacccag gaaaaagagg gctcctctgg gagatgtatg cttactctct 250  
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<210> 43

<211> 263

<212> PRT

<213> Homo sapiens

<400> 43

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35 40 45

Lys Glu Gly Ser Ser Gly Arg Cys Met Leu Thr Leu Leu Gly Leu

	50								55					60
Ser	Phe	Ile	Leu	Ala	Gly	Leu	Ile	Val	Gly	Gly	Ala	Cys	Ile	Tyr
				65					70					75
Lys	Tyr	Phe	Met	Pro	Lys	Ser	Thr	Ile	Tyr	Arg	Gly	Glu	Met	Cys
				80					85					90
Phe	Phe	Asp	Ser	Glu	Asp	Pro	Ala	Asn	Ser	Leu	Arg	Gly	Gly	Glu
				95					100					105
Pro	Asn	Phe	Leu	Pro	Val	Thr	Glu	Glu	Ala	Asp	Ile	Arg	Glu	Asp
				110					115					120
Asp	Asn	Ile	Ala	Ile	Ile	Asp	Val	Pro	Val	Pro	Ser	Phe	Ser	Asp
				125					130					135
Ser	Asp	Pro	Ala	Ala	Ile	Ile	His	Asp	Phe	Glu	Lys	Gly	Met	Thr
				140					145					150
Ala	Tyr	Leu	Asp	Leu	Leu	Leu	Gly	Asn	Cys	Tyr	Leu	Met	Pro	Leu
				155					160					165
Asn	Thr	Ser	Ile	Val	Met	Pro	Pro	Lys	Asn	Leu	Val	Glu	Leu	Phe
				170					175					180
Gly	Lys	Leu	Ala	Ser	Gly	Arg	Tyr	Leu	Pro	Gln	Thr	Tyr	Val	Val
				185					190					195
Arg	Glu	Asp	Leu	Val	Ala	Val	Glu	Glu	Ile	Arg	Asp	Val	Ser	Asn
				200					205					210
Leu	Gly	Ile	Phe	Ile	Tyr	Gln	Leu	Cys	Asn	Asn	Arg	Lys	Ser	Phe
				215					220					225
Arg	Leu	Arg	Arg	Arg	Asp	Leu	Leu	Leu	Gly	Phe	Asn	Lys	Arg	Ala
				230					235					240
Ile	Asp	Lys	Cys	Trp	Lys	Ile	Arg	His	Phe	Pro	Asn	Glu	Phe	Ile
				245					250					255
Val	Glu	Thr	Lys	Ile	Cys	Gln	Glu							
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<210> 44

<211> 24

<212> DNA

<213> Artificial

<220>

<221> Artificial sequence

<222> 1-24

<223> Synthetic construct.

<400> 44

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<210> 45

<211> 20  
 <212> DNA  
 <213> Artificial  
  
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 <221> Artificial sequence  
 <222> 1-20  
 <223> Synthetic construct.  
  
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 <212> DNA  
 <213> Artificial  
  
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 <222> 1-26  
 <223> Synthetic construct.  
  
 <400> 46  
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 <212> DNA  
 <213> Artificial  
  
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 <223> Synthetic construct.  
  
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 <210> 48  
 <211> 25  
 <212> DNA  
 <213> Artificial  
  
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 <222> 1-25  
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 <210> 49  
 <211> 1969  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 49  
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gtttcggcgg cagccccag cctcctcatc cttctgttgc tgctgctggg 200  
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<210> 50
<211> 283
<212> PRT
<213> Homo sapiens
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<400>	50													
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Leu	Leu	Gly	Ser	Val	Pro	Ala	Thr	Asp	Ala	Arg	Ser	Val	Pro	Leu
				20					25					30
Lys	Ala	Thr	Phe	Leu	Glu	Asp	Val	Ala	Gly	Ser	Gly	Glu	Ala	Glu
				35					40					45
Gly	Ser	Ser	Ala	Ser	Ser	Pro	Ser	Leu	Pro	Pro	Pro	Trp	Thr	Pro
				50					55					60
Ala	Leu	Ser	Pro	Thr	Ser	Met	Gly	Pro	Gln	Pro	Thr	Thr	Leu	Gly
				65					70					75
Gly	Pro	Ser	Pro	Pro	Thr	Asn	Phe	Leu	Asp	Gly	Ile	Val	Asp	Phe
				80					85					90
Phe	Arg	Gln	Tyr	Val	Met	Leu	Ile	Ala	Val	Val	Gly	Ser	Leu	Ala
				95					100					105
Phe	Leu	Leu	Met	Phe	Ile	Val	Cys	Ala	Ala	Val	Ile	Thr	Arg	Gln
				110					115					120
Lys	Gln	Lys	Ala	Ser	Ala	Tyr	Tyr	Pro	Ser	Ser	Phe	Pro	Lys	Lys
				125					130					135
Lys	Tyr	Val	Asp	Gln	Ser	Asp	Arg	Ala	Gly	Gly	Pro	Arg	Ala	Phe
				140					145					150
Ser	Glu	Val	Pro	Asp	Arg	Ala	Pro	Asp	Ser	Arg	Pro	Glu	Glu	Ala
				155					160					165

Leu Asp Ser Ser Arg Gln Leu Gln Ala Asp Ile Leu Ala Ala Thr  
170 175 180  
Gln Asn Leu Lys Ser Pro Thr Arg Ala Ala Leu Gly Gly Gly Asp  
185 190 195  
Gly Ala Arg Met Val Glu Gly Arg Gly Ala Glu Glu Glu Glu Lys  
200 205 210  
Gly Ser Gln Glu Gly Asp Gln Glu Val Gln Gly His Gly Val Pro  
215 220 225  
Val Glu Thr Pro Glu Ala Gln Glu Glu Pro Cys Ser Gly Val Leu  
230 235 240  
Glu Gly Ala Val Val Ala Gly Glu Gly Gln Gly Glu Leu Glu Gly  
245 250 255  
Ser Leu Leu Leu Ala Gln Glu Ala Gln Gly Pro Val Gly Pro Pro  
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Glu Ser Pro Cys Ala Cys Ser Ser Val His Pro Ser Val  
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<210> 51  
<211> 1734  
<212> DNA  
<213> Homo sapiens

<400> 51  
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<210> 52  
<211> 440  
<212> PRT  
<213> Homo sapiens

<400> 52  
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20 25 30  
Thr Gly Thr Asn Ile Gly Glu Ala Leu Gly His Gly Leu Gly Asp  
35 40 45  
Ala Leu Ser Glu Gly Val Gly Lys Ala Ile Gly Lys Glu Ala Gly

50	55	60
Gly Ala Ala Gly Ser Lys Val Ser Glu Ala Leu Gly Gln Gly Thr		
65	70	75
Arg Glu Ala Val Gly Thr Gly Val Arg Gln Val Pro Gly Phe Gly		
80	85	90
Ala Ala Asp Ala Leu Gly Asn Arg Val Gly Glu Ala Ala His Ala		
95	100	105
Leu Gly Asn Thr Gly His Glu Ile Gly Arg Gln Ala Glu Asp Val		
110	115	120
Ile Arg His Gly Ala Asp Ala Val Arg Gly Ser Trp Gln Gly Val		
125	130	135
Pro Gly His Ser Gly Ala Trp Glu Thr Ser Gly Gly His Gly Ile		
140	145	150
Phe Gly Ser Gln Gly Gly Leu Gly Gly Gln Gly Gln Gly Asn Pro		
155	160	165
Gly Gly Leu Gly Thr Pro Trp Val His Gly Tyr Pro Gly Asn Ser		
170	175	180
Ala Gly Ser Phe Gly Met Asn Pro Gln Gly Ala Pro Trp Gly Gln		
185	190	195
Gly Gly Asn Gly Gly Pro Pro Asn Phe Gly Thr Asn Thr Gln Gly		
200	205	210
Ala Val Ala Gln Pro Gly Tyr Gly Ser Val Arg Ala Ser Asn Gln		
215	220	225
Asn Glu Gly Cys Thr Asn Pro Pro Pro Ser Gly Ser Gly Gly Gly		
230	235	240
Ser Ser Asn Ser Gly Gly Gly Ser Gly Ser Gln Ser Gly Ser Ser		
245	250	255
Gly Ser Gly Ser Asn Gly Asp Asn Asn Asn Gly Ser Ser Ser Gly		
260	265	270
Gly Ser Ser Ser Gly Ser Ser Ser Gly Ser Ser Ser Gly Gly Ser		
275	280	285
Ser Gly Gly Ser Ser Gly Gly Ser Ser Gly Asn Ser Gly Gly Ser		
290	295	300
Arg Gly Asp Ser Gly Ser Glu Ser Ser Trp Gly Ser Ser Thr Gly		
305	310	315
Ser Ser Ser Gly Asn His Gly Gly Ser Gly Gly Gly Asn Gly His		
320	325	330
Lys Pro Gly Cys Glu Lys Pro Gly Asn Glu Ala Arg Gly Ser Gly		
335	340	345

Glu Ser Gly Ile Gln Gly Phe Arg Gly Gln Gly Val Ser Ser Asn  
350 355 360  
Met Arg Glu Ile Ser Lys Glu Gly Asn Arg Leu Leu Gly Gly Ser  
365 370 375  
Gly Asp Asn Tyr Arg Gly Gln Gly Ser Ser Trp Gly Ser Gly Gly  
380 385 390  
Gly Asp Ala Val Gly Gly Val Asn Thr Val Asn Ser Glu Thr Ser  
395 400 405  
Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser  
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Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg  
425 430 435  
Ser Ser Arg Ile Pro  
440

<210> 53  
<211> 3580  
<212> DNA  
<213> Homo sapiens

<400> 53  
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ctttgctgac catgttggtc ccttgctgga atattaccgg gacatcttca 150  
ctctcctgct ggcctgcac cggagcttgg tgttgctgca ggagagttag 200  
gggaagatgt gtttcctgaa caagctgctg ctacttgctg tcctgggctg 250  
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gtccctcata tgcctttgag gtggacacag tagccccaga gcatggcttg 350  
gacaatgcgc ctgtggtgga ccagcagctg ctctacacct gctgccccta 400  
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gacggagtgg gggcttcatg aggaaaatca cccccaccac taccaccagc 500  
ctgggagccc agccttccca gaccagccag gggctgcagg cacagctcgc 550  
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tcgtggcaga aagaattgga tcaaactgtg tcaaacatat caaggctaca 650  
ctggtggcag atctggtgcg ccaggcagag tcacttctcc aagagcagct 700  
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Asn Val Gln Val	Phe 320	Glu Pro Pro Glu	Val 325	Thr Met Glu Leu	Ser 330
Gln Leu Val Ile	Pro 335	Trp Gly Gln Ser	Ala 340	Lys Leu Thr Cys	Glu 345
Val Arg Gly Asn	Pro 350	Pro Pro Ser Val	Leu 355	Trp Leu Arg Asn	Ala 360
Val Pro Leu Ile	Ser 365	Ser Gln Arg Leu	Arg 370	Leu Ser Arg Arg	Ala 375
Leu Arg Val Leu	Ser 380	Met Gly Pro Glu	Asp 385	Glu Gly Val Tyr	Gln 390
Cys Met Ala Glu	Asn 395	Glu Val Gly Ser	Ala 400	His Ala Val Val	Gln 405
Leu Arg Thr Ser	Arg 410	Pro Ser Ile Thr	Pro 415	Arg Leu Trp Gln	Asp 420
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Gly Asn Pro Glu	Gln 440	Met Leu Arg Gly	Gln 445	Pro Ala Leu Pro	Arg 450
Pro Pro Thr Ser	Val 455	Gly Pro Ala Ser	Pro 460	Lys Cys Pro Gly	Glu 465
Lys Gly Gln Gly	Ala 470	Pro Ala Glu Ala	Pro 475	Ile Ile Leu Ser	Ser 480
Pro Arg Thr Ser	Lys 485	Thr Asp Ser Tyr	Glu 490	Leu Val Trp Arg	Pro 495
Arg His Glu Gly	Ser 500	Gly Arg Ala Pro	Ile 505	Leu Tyr Tyr Val	Val 510
Lys His Arg Lys	Gln 515	Val Thr Asn Ser	Ser 520	Asp Asp Trp Thr	Ile 525
Ser Gly Ile Pro	Ala 530	Asn Gln His Arg	Leu 535	Thr Leu Thr Arg	Leu 540
Asp Pro Gly Ser	Leu 545	Tyr Glu Val Glu	Met 550	Ala Ala Tyr Asn	Cys 555
Ala Gly Glu Gly	Gln Thr Ala Met	Val Thr Phe Arg	Thr Gly Arg		



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Arg	Asp	Asp	Pro	Gly	Ala	Ser	Pro	Gln	Ser	Ser	Ser	Gln	Pro	Asp					
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His	Gly	Arg	Leu	Ser	Pro	Pro	Glu	Ala	Pro	Asp	Arg	Pro	Thr	Ile					
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Ser	Thr	Ala	Ser	Glu	Thr	Ser	Val	Tyr	Val	Thr	Trp	Ile	Pro	Arg					
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Tyr	Ile	Pro	Ala	Ser	Asn	Asn	Asn	Thr	Pro	Ile	His	Gly	Phe	Tyr					
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Ile	Tyr	Tyr	Arg	Pro	Thr	Asp	Ser	Asp	Asn	Asp	Ser	Asp	Tyr	Lys					
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Lys	Asp	Met	Val	Glu	Gly	Asp	Lys	Tyr	Trp	His	Ser	Ile	Ser	His					
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Leu	Gln	Pro	Glu	Thr	Ser	Tyr	Asp	Ile	Lys	Met	Gln	Cys	Phe	Asn					
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Glu	Gly	Gly	Glu	Ser	Glu	Phe	Ser	Asn	Val	Met	Ile	Cys	Glu	Thr					
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Lys	Ala	Arg	Lys	Ser	Ser	Gly	Gln	Pro	Gly	Arg	Leu	Pro	Pro	Pro					
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Thr	Leu	Ala	Pro	Pro	Gln	Pro	Pro	Leu	Pro	Glu	Thr	Ile	Glu	Arg					
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[illegible]

68

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 <212> DNA  
 <213> Homo sapiens

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 <221> unsure  
 <222> 678  
 <223> unknown base

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<213> Homo sapiens

[illegible]

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Arg	Met	Cys	Ala	Ser 170	Tyr	Ser	Glu	Leu	Glu 175	Leu	Val	Thr	Ser	Ala 180
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Xaa	Gly	Gly	His	Ser 200	Leu	Asp	Ser	Ser	Leu 205	Ser	Val	Leu	Arg	Ser 210
Phe	Tyr	Val	Leu	Gly 215	Val	Arg	Tyr	Leu	Thr 220	Leu	Thr	Phe	Thr	Cys 225
Ser	Thr	Pro	Trp	Ala 230	Glu	Ser	Ser	Thr	Lys 235	Phe	Arg	His	His	Met 240
Tyr	Thr	Asn	Val	Ser 245	Gly	Leu	Thr	Ser	Phe 250	Gly	Glu	Lys	Val	Val 255
Glu	Glu	Leu	Asn	Arg	Leu	Gly	Met	Met	Ile	Asp	Leu	Ser	Tyr	Ala

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Val Ile Phe Ser His Ser Ala Ala Arg	Ala Val Cys Asp Asn Leu	
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305	310	315
Ile Val Met Val Thr Leu Ser Met Gly	Val Leu Gln Cys Asn Leu	
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Leu Ala Asn Val Ser Thr Val Ala Asp	His Phe Asp His Ile Arg	
335	340	345
Ala Val Ile Gly Ser Glu Phe Ile Gly	Ile Gly Gly Asn Tyr Asp	
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Gly Thr Gly Arg Phe Pro Gln Gly Leu	Glu Asp Val Ser Thr Tyr	
365	370	375
Pro Val Leu Ile Glu Glu Leu Leu Ser	Arg Xaa Trp Ser Glu Glu	
380	385	390
Glu Leu Gln Gly Val Leu Arg Gly Asn	Leu Leu Arg Val Phe Arg	
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Gln Val Glu Lys Val Arg Glu Glu Ser	Arg Ala Gln Ser Pro Val	
410	415	420
Glu Ala Glu Phe Pro Tyr Gly Gln Leu	Ser Thr Ser Cys His Ser	
425	430	435
His Leu Val Pro Gln Asn Gly His Gln	Ala Thr His Leu Glu Val	
440	445	450
Thr Lys Gln Pro Thr Asn Arg Val Pro	Trp Arg Ser Ser Asn Ala	
455	460	465
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485		

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 <400> 64

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<223> Synthetic construct.

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<212> DNA  
<213> Homo sapiens

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<211> 183
<212> PRT
<213> Homo sapiens
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          20          25          30

Cys  Ile  Cys  Pro  Pro  Tyr  Arg  Asn  Ile  Ser  Gly  His  Ile  Tyr  Asn
          35          40          45

Gln  Asn  Val  Ser  Gln  Lys  Asp  Cys  Asn  Cys  Leu  His  Val  Val  Glu
          50          55          60

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Ile Ile Val Ile Tyr Leu Ser Val Val Gly Ala Leu Leu Leu Tyr  
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Ala Tyr Thr Glu Gln Leu His Asn Glu Glu Glu Asn Glu Asp Ala  
125 130 135  
Arg Ser Met Ala Ala Ala Ala Ala Ser Leu Gly Gly Pro Arg Ala  
140 145 150  
Asn Thr Val Leu Glu Arg Val Glu Gly Ala Gln Gln Arg Trp Lys  
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Leu Gln Val Gln Glu Gln Arg Lys Thr Val Phe Asp Arg His Lys  
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Met Leu Ser

<210> 69  
<211> 3170  
<212> DNA  
<213> Homo sapiens

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<211> 259

<212> PRT

<213> Homo sapiens

<400> 70

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Ser	Arg	Ala	Lys	Leu	Asn	Ser	Ile	Lys	Ser	Ser	Leu	Gly	Gly	Glu
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<210> 72  
<211> 363  
<212> PRT  
<213> Homo sapiens

<400> 72  
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Phe Gly Glu Leu Ala Pro Pro Lys Met Ala Asn Ile Thr Ser Ser  
35 40 45  
Gln Ile Leu Asp Gln Leu Lys Ala Pro Ser Leu Gly Gln Phe Thr  
50 55 60  
Thr Thr Pro Ser Thr Gln Gln Asn Ser Thr Ser His Pro Thr Thr  
65 70 75  
Thr Thr Ser Trp Asp Leu Lys Pro Pro Thr Ser Gln Ser Ser Val  
80 85 90  
Leu Ser His Leu Asp Phe Lys Ser Gln Pro Glu Pro Ser Pro Val  
95 100 105  
Leu Ser Gln Leu Ser Gln Arg Gln Gln His Gln Ser Gln Ala Val  
110 115 120  
Thr Val Pro Pro Pro Gly Leu Glu Ser Phe Pro Ser Gln Ala Lys  
125 130 135  
Leu Arg Glu Ser Thr Pro Gly Asp Ser Pro Ser Thr Val Asn Lys  
140 145 150  
Leu Leu Gln Leu Pro Ser Thr Thr Ile Glu Asn Ile Ser Val Ser  
155 160 165  
Val His Gln Pro Gln Pro Lys His Ile Lys Leu Ala Lys Arg Arg  
170 175 180  
Ile Pro Pro Ala Ser Lys Ile Pro Ala Ser Ala Val Glu Met Pro  
185 190 195  
Gly Ser Ala Asp Val Thr Gly Leu Asn Val Gln Phe Gly Ala Leu  
200 205 210  
Glu Phe Gly Ser Glu Pro Ser Leu Ser Glu Phe Gly Ser Ala Pro  
215 220 225

Ser Ser Glu Asn Ser Asn Gln Ile Pro Ile Ser Leu Tyr Ser Lys  
230 235 240

Ser Leu Ser Glu Pro Leu Asn Thr Ser Leu Ser Met Thr Ser Ala  
245 250 255

Val Gln Asn Ser Thr Tyr Thr Thr Ser Val Ile Thr Ser Cys Ser  
260 265 270

Leu Thr Ser Ser Ser Leu Asn Ser Ala Ser Pro Val Ala Met Ser  
275 280 285

Ser Ser Tyr Asp Gln Ser Ser Val His Asn Arg Ile Pro Tyr Gln  
290 295 300

Ser Pro Val Ser Ser Ser Glu Ser Ala Pro Gly Thr Ile Met Asn  
305 310 315

Gly His Gly Gly Gly Arg Ser Gln Gln Thr Leu Asp Ser Lys Tyr  
320 325 330

Ser Ser Lys Leu Leu Leu Ser Trp Leu Val Pro Thr Lys Gln Arg  
335 340 345

Lys Arg Ile Ala His Val Met Trp Lys Thr Pro Val Gly Gln Trp  
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Leu Ile Arg

<210> 73  
<211> 26  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial sequence  
<222> 1-26  
<223> Synthetic construct.

<400> 73  
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<210> 74  
<211> 22  
<212> DNA  
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<220>  
<221> Artificial sequence  
<222> 1-22  
<223> Synthetic construct.

<400> 74  
tggtaaactg gcccaaactc gg 22

<210> 75  
<211> 50

<212> DNA  
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<220>  
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<223> Synthetic construct

<400> 75  
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<210> 76  
<211> 1989  
<212> DNA  
<213> Homo sapiens

<400> 76  
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caataaagtc cccatctgat ttttaaaaaa aaaaaaaaaa 1989

<210> 77

<211> 341

<212> PRT

<213> Homo sapiens

<400> 77

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Gln	Ser	Ser	Ala	Val	Leu	Leu	His	Ser	Ala	Val	Glu	Glu	Thr	Asp
				20					25					30
Ala	Gly	Leu	Tyr	Thr	Cys	Asn	Leu	His	His	His	Tyr	Cys	His	Leu
				35					40					45
Tyr	Glu	Ser	Leu	Ala	Val	Arg	Leu	Glu	Val	Thr	Asp	Gly	Pro	Pro
				50					55					60
Ala	Thr	Pro	Ala	Tyr	Trp	Asp	Gly	Glu	Lys	Glu	Val	Leu	Ala	Val
				65					70					75

Ala Arg Gly Ala Pro Ala Leu Leu Thr Cys Val Asn Arg Gly His  
80 85 90

Val Trp Thr Asp Arg His Val Glu Glu Ala Gln Gln Val Val His  
95 100 105

Trp Asp Arg Gln Pro Pro Gly Val Pro His Asp Arg Ala Asp Arg  
110 115 120

Leu Leu Asp Leu Tyr Ala Ser Gly Glu Arg Arg Ala Tyr Gly Pro  
125 130 135

Leu Phe Leu Arg Asp Arg Val Ala Val Gly Ala Asp Ala Phe Glu  
140 145 150

Arg Gly Asp Phe Ser Leu Arg Ile Glu Pro Leu Glu Val Ala Asp  
155 160 165

Glu Gly Thr Tyr Ser Cys His Leu His His His Tyr Cys Gly Leu  
170 175 180

His Glu Arg Arg Val Phe His Leu Thr Val Ala Glu Pro His Ala  
185 190 195

Glu Pro Pro Pro Arg Gly Ser Pro Gly Asn Gly Ser Ser His Ser  
200 205 210

Gly Ala Pro Gly Pro Asp Pro Thr Leu Ala Arg Gly His Asn Val  
215 220 225

Ile Asn Val Ile Val Pro Glu Ser Arg Ala His Phe Phe Gln Gln  
230 235 240

Leu Gly Tyr Val Leu Ala Thr Leu Leu Leu Phe Ile Leu Leu Leu  
245 250 255

Val Thr Val Leu Leu Ala Ala Arg Arg Arg Arg Gly Gly Tyr Glu  
260 265 270

Tyr Ser Asp Gln Lys Ser Gly Lys Ser Lys Gly Lys Asp Val Asn  
275 280 285

Leu Ala Glu Phe Ala Val Ala Ala Gly Asp Gln Met Leu Tyr Arg  
290 295 300

Ser Glu Asp Ile Gln Leu Asp Tyr Lys Asn Asn Ile Leu Lys Glu  
305 310 315

Arg Ala Glu Leu Ala His Ser Pro Leu Pro Ala Lys Tyr Ile Asp  
320 325 330

Leu Asp Lys Gly Phe Arg Lys Glu Asn Cys Lys  
335 340

<210> 78  
<211> 2243  
<212> DNA  
<213> Homo sapiens

<400> 78

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cctgggtcaa	gatgagggtc	tttcagtgtt	cctgtttaca	acatgtcaaa	2200
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<210> 79

<211> 475

&lt;212&gt; PRT

<213> Homo sapiens

<400> 79

Met	Ala	Val	Val	Ser	Glu	Asp	Asp	Phe	Gln	His	Ser	Ser	Asn	Ser
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Thr	Tyr	Gly	Thr	Thr	Ser	Ser	Ser	Leu	Arg	Ala	Asp	Gln	Glu	Ala
				20					25					30
Leu	Leu	Glu	Lys	Leu	Leu	Asp	Arg	Pro	Pro	Pro	Gly	Leu	Gln	Arg
				35					40					45
Pro	Glu	Asp	Arg	Phe	Cys	Gly	Thr	Tyr	Ile	Ile	Phe	Phe	Ser	Leu
				50					55					60
Gly	Ile	Gly	Ser	Leu	Leu	Pro	Trp	Asn	Phe	Phe	Ile	Thr	Ala	Lys
				65					70					75
Glu	Tyr	Trp	Met	Phe	Lys	Leu	Arg	Asn	Ser	Ser	Ser	Pro	Ala	Thr
				80					85					90
Gly	Glu	Asp	Pro	Glu	Gly	Ser	Asp	Ile	Leu	Asn	Tyr	Phe	Glu	Ser
				95					100					105

Tyr	Leu	Ala	Val	Ala	Ser	Thr	Val	Pro	Ser	Met	Leu	Cys	Leu	Val	110	115	120
Ala	Asn	Phe	Leu	Leu	Val	Asn	Arg	Val	Ala	Val	His	Ile	Arg	Val	125	130	135
Leu	Ala	Ser	Leu	Thr	Val	Ile	Leu	Ala	Ile	Phe	Met	Val	Ile	Thr	140	145	150
Ala	Leu	Val	Lys	Val	Asp	Thr	Ser	Ser	Trp	Thr	Arg	Gly	Phe	Phe	155	160	165
Ala	Val	Thr	Ile	Val	Cys	Met	Val	Ile	Leu	Ser	Gly	Ala	Ser	Thr	170	175	180
Val	Phe	Ser	Ser	Ser	Ile	Tyr	Gly	Met	Thr	Gly	Ser	Phe	Pro	Met	185	190	195
Arg	Asn	Ser	Gln	Ala	Leu	Ile	Ser	Gly	Gly	Ala	Met	Gly	Gly	Thr	200	205	210
Val	Ser	Ala	Val	Ala	Ser	Leu	Val	Asp	Leu	Ala	Ala	Ser	Ser	Asp	215	220	225
Val	Arg	Asn	Ser	Ala	Leu	Ala	Phe	Phe	Leu	Thr	Ala	Thr	Ile	Phe	230	235	240
Leu	Val	Leu	Cys	Met	Gly	Leu	Tyr	Leu	Leu	Leu	Ser	Arg	Leu	Glu	245	250	255
Tyr	Ala	Arg	Tyr	Tyr	Met	Arg	Pro	Val	Leu	Ala	Ala	His	Val	Phe	260	265	270
Ser	Gly	Glu	Glu	Glu	Leu	Pro	Gln	Asp	Ser	Leu	Ser	Ala	Pro	Ser	275	280	285
Val	Ala	Ser	Arg	Phe	Ile	Asp	Ser	His	Thr	Pro	Pro	Leu	Arg	Pro	290	295	300
Ile	Leu	Lys	Lys	Thr	Ala	Ser	Leu	Gly	Phe	Cys	Val	Thr	Tyr	Val	305	310	315
Phe	Phe	Ile	Thr	Ser	Leu	Ile	Tyr	Pro	Ala	Val	Cys	Thr	Asn	Ile	320	325	330
Glu	Ser	Leu	Asn	Lys	Gly	Ser	Gly	Ser	Leu	Trp	Thr	Thr	Lys	Phe	335	340	345
Phe	Ile	Pro	Leu	Thr	Thr	Phe	Leu	Leu	Tyr	Asn	Phe	Ala	Asp	Leu	350	355	360
Cys	Gly	Arg	Gln	Leu	Thr	Ala	Trp	Ile	Gln	Val	Pro	Gly	Pro	Asn	365	370	375
Ser	Lys	Ala	Leu	Pro	Gly	Phe	Val	Leu	Leu	Arg	Thr	Cys	Leu	Ile	380	385	390
Pro	Leu	Phe	Val	Leu	Cys	Asn	Tyr	Gln	Pro	Arg	Val	His	Leu	Lys			

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410	415	420
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425	430	435
Tyr Gly Pro Lys Ile Val Pro Arg Glu	Leu Ala Glu Ala Thr Gly	
440	445	450
Val Val Met Ser Phe Tyr Val Cys Leu	Gly Leu Thr Leu Gly Ser	
455	460	465
Ala Cys Ser Thr Leu Leu Val His Leu	Ile	
470	475	

<210> 80  
 <211> 22  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial sequence  
 <222> 1-22  
 <223> Synthetic construct.

<400> 80  
 ttttgcggtc accattgtct gc 22

<210> 81  
 <211> 23  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> Artificial sequence  
 <222> 1-23  
 <223> Synthetic construct.

<400> 81  
 cgtaggtgac acagaagccc agg 23

<210> 82  
 <211> 49  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial sequence  
 <222> 1-49  
 <223> Synthetic construct.

<400> 82  
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<210> 83  
 <211> 1844

<212> DNA

<213> Homo sapiens

<400> 83

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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1844

<210> 84  
 <211> 567  
 <212> PRT  
 <213> Homo sapiens

<400> 84  
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 Asp Pro Phe Glu Lys Cys Met Gln Asp Pro Asp Tyr Glu Gln Leu  
 35 40 45  
 Leu Lys Val Val Thr Trp Gly Leu Asn Arg Thr Leu Lys Pro Gln  
 50 55 60  
 Arg Val Ile Val Val Gly Ala Gly Val Ala Gly Leu Val Ala Ala  
 65 70 75  
 Lys Val Leu Ser Asp Ala Gly His Lys Val Thr Ile Leu Glu Ala  
 80 85 90  
 Asp Asn Arg Ile Gly Gly Arg Ile Phe Thr Tyr Arg Asp Gln Asn  
 95 100 105  
 Thr Gly Trp Ile Gly Glu Leu Gly Ala Met Arg Met Pro Ser Ser  
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 His Arg Ile Leu His Lys Leu Cys Gln Gly Leu Gly Leu Asn Leu  
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 Thr Lys Phe Thr Gln Tyr Asp Lys Asn Thr Trp Thr Glu Val His  
 140 145 150  
 Glu Val Lys Leu Arg Asn Tyr Val Val Glu Lys Val Pro Glu Lys  
 155 160 165



Leu Gly Tyr Ala	Leu Arg Pro Gln Glu Lys Gly His Ser Pro Glu	170	175	180
Asp Ile Tyr Gln	Met Ala Leu Asn Gln Ala Leu Lys Asp Leu Lys	185	190	195
Ala Leu Gly Cys	Arg Lys Ala Met Lys Lys Phe Glu Arg His Thr	200	205	210
Leu Leu Glu Tyr	Leu Leu Gly Glu Gly Asn Leu Ser Arg Pro Ala	215	220	225
Val Gln Leu Leu	Gly Asp Val Met Ser Glu Asp Gly Phe Phe Tyr	230	235	240
Leu Ser Phe Ala	Glu Ala Leu Arg Ala His Ser Cys Leu Ser Asp	245	250	255
Arg Leu Gln Tyr	Ser Arg Ile Val Gly Gly Trp Asp Leu Leu Pro	260	265	270
Arg Ala Leu Leu	Ser Ser Leu Ser Gly Leu Val Leu Leu Asn Ala	275	280	285
Pro Val Val Ala	Met Thr Gln Gly Pro His Asp Val His Val Gln	290	295	300
Ile Glu Thr Ser	Pro Pro Ala Arg Asn Leu Lys Val Leu Lys Ala	305	310	315
Asp Val Val Leu	Leu Thr Ala Ser Gly Pro Ala Val Lys Arg Ile	320	325	330
Thr Phe Ser Pro	Pro Leu Pro Arg His Met Gln Glu Ala Leu Arg	335	340	345
Arg Leu His Tyr	Val Pro Ala Thr Lys Val Phe Leu Ser Phe Arg	350	355	360
Arg Pro Phe Trp	Arg Glu Glu His Ile Glu Gly Gly His Ser Asn	365	370	375
Thr Asp Arg Pro	Ser Arg Met Ile Phe Tyr Pro Pro Pro Arg Glu	380	385	390
Gly Ala Leu Leu	Leu Ala Ser Tyr Thr Trp Ser Asp Ala Ala Ala	395	400	405
Ala Phe Ala Gly	Leu Ser Arg Glu Glu Ala Leu Arg Leu Ala Leu	410	415	420
Asp Asp Val Ala	Ala Leu His Gly Pro Val Val Arg Gln Leu Trp	425	430	435
Asp Gly Thr Gly	Val Val Lys Arg Trp Ala Glu Asp Gln His Ser	440	445	450
Gln Gly Gly Phe	Val Val Gln Pro Pro Ala Leu Trp Gln Thr Glu			

455	460	465
Lys Asp Asp Trp Thr Val Pro Tyr Gly Arg Ile Tyr Phe Ala Gly		
470	475	480
Glu His Thr Ala Tyr Pro His Gly Trp Val Glu Thr Ala Val Lys		
485	490	495
Ser Ala Leu Arg Ala Ala Ile Lys Ile Asn Ser Arg Lys Gly Pro		
500	505	510
Ala Ser Asp Thr Ala Ser Pro Glu Gly His Ala Ser Asp Met Glu		
515	520	525
Gly Gln Gly His Val His Gly Val Ala Ser Ser Pro Ser His Asp		
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Leu Ala Lys Glu Glu Gly Ser His Pro Pro Val Gln Gly Gln Leu		
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Ser Leu Gln Asn Thr Thr His Thr Arg Thr Ser His		
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 <211> 3316  
 <212> DNA  
 <213> Homo sapiens

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 gaactcagag ccgggaagcc cccattcact agaagcactg agagatgcgg 200  
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 acgtactcta tggtagctgt acctctgtat gacaccttgg gaccagaagc 750

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<210> 86
<211> 739
<212> PRT
<213> Homo sapiens

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<400> 86
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          20             25             30

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[illegible]

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Glu	His	Ala	Tyr	Glu	Pro	Thr	Pro	Asp	Asp	Val	Ala	Ile	Ser	Tyr
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Leu	Pro	Leu	Ala	His	Met	Phe	Glu	Arg	Ile	Val	Gln	Ala	Val	Val
				365					370					375
Tyr	Ser	Cys	Gly	Ala	Arg	Val	Gly	Phe	Phe	Gln	Gly	Asp	Ile	Arg
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Leu	Leu	Ala	Asp	Asp	Met	Lys	Thr	Leu	Lys	Pro	Thr	Leu	Phe	Pro
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Ala	Val	Pro	Arg	Leu	Leu	Asn	Arg	Ile	Tyr	Asp	Lys	Val	Gln	Asn
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Glu	Ala	Lys	Thr	Pro	Leu	Lys	Lys	Phe	Leu	Leu	Lys	Leu	Ala	Val
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Ser	Ser	Lys	Phe	Lys	Glu	Leu	Gln	Lys	Gly	Ile	Ile	Arg	His	Asp
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Ser	Phe	Trp	Asp	Lys	Leu	Ile	Phe	Ala	Lys	Ile	Gln	Asp	Ser	Leu
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Gly	Gly	Arg	Val	Arg	Val	Ile	Val	Thr	Gly	Ala	Ala	Pro	Met	Ser
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Thr	Ser	Val	Met	Thr	Phe	Phe	Arg	Ala	Ala	Met	Gly	Cys	Gln	Val
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Tyr	Glu	Ala	Tyr	Gly	Gln	Thr	Glu	Cys	Thr	Gly	Gly	Cys	Thr	Phe
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Thr	Leu	Pro	Gly	Asp	Trp	Thr	Ser	Gly	His	Val	Gly	Val	Pro	Leu
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Ala	Cys	Asn	Tyr	Val	Lys	Leu	Glu	Asp	Val	Ala	Asp	Met	Asn	Tyr
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Phe	Thr	Val	Asn	Asn	Glu	Gly	Glu	Val	Cys	Ile	Lys	Gly	Thr	Asn
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Val	Phe	Lys	Gly	Tyr	Leu	Lys	Asp	Pro	Glu	Lys	Thr	Gln	Glu	Ala
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Leu	Asp	Ser	Asp	Gly	Trp	Leu	His	Thr	Gly	Asp	Ile	Gly	Arg	Trp
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Leu	Pro	Asn	Gly	Thr	Leu	Lys	Ile	Ile	Asp	Arg	Lys	Lys	Asn	Ile
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Phe	Lys	Leu	Ala	Gln	Gly	Glu	Tyr	Ile	Ala	Pro	Glu	Lys	Ile	Glu
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Asn Ile Tyr Asn Arg Ser Gln Pro Val Leu Gln Ile Phe Val His  
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 Gly Glu Ser Leu Arg Ser Ser Leu Val Gly Val Val Val Pro Asp  
 635 640 645  
 Thr Asp Val Leu Pro Ser Phe Ala Ala Lys Leu Gly Val Lys Gly  
 650 655 660  
 Ser Phe Glu Glu Leu Cys Gln Asn Gln Val Val Arg Glu Ala Ile  
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 Leu Glu Asp Leu Gln Lys Ile Gly Lys Glu Ser Gly Leu Lys Thr  
 680 685 690  
 Phe Glu Gln Val Lys Ala Ile Phe Leu His Pro Glu Pro Phe Ser  
 695 700 705  
 Ile Glu Asn Gly Leu Leu Thr Pro Thr Leu Lys Ala Lys Arg Gly  
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 <212> DNA  
 <213> Homo sapiens

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<210> 88
<211> 660
<212> PRT
<213> Homo sapiens
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Asn	Gln	Arg	Ala	Leu	Arg	Arg	Phe	Cys	Gln	Thr	Gly	Ala	Val	Leu
				35					40					45
Phe	Leu	Leu	Val	Thr	Val	Ile	Val	Asn	Ile	Lys	Leu	Ile	Leu	Asp
				50					55					60
Thr	Arg	Arg	Ala	Ile	Ser	Glu	Ala	Asn	Glu	Asp	Pro	Glu	Pro	Glu
				65					70					75
Gln	Asp	Tyr	Asp	Glu	Ala	Leu	Gly	Arg	Leu	Glu	Pro	Pro	Arg	Arg
				80					85					90
Arg	Gly	Ser	Gly	Pro	Arg	Arg	Val	Leu	Asp	Val	Glu	Val	Tyr	Ser
				95					100					105
Ser	Arg	Ser	Lys	Val	Tyr	Val	Ala	Val	Asp	Gly	Thr	Thr	Val	Leu
				110					115					120
Glu	Asp	Glu	Ala	Arg	Glu	Gln	Gly	Arg	Gly	Ile	His	Val	Ile	Val
				125					130					135

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 Ala Phe Val Gly Arg Lys Gly Gly Pro Val Phe Gly Glu Lys His  
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 Trp Ala Asp Thr Glu Leu Asn Arg Arg Arg Arg Arg Phe Cys Ser  
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 Tyr Arg Met Leu Arg Ser Leu Leu Ser Ala Gln Gly Val Ser Pro  
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 350 355 360  
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 365 370 375  
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 Val Leu Glu Glu Asp Leu Asp Ile Ala Val Asp Phe Phe Ser Phe  
 395 400 405  
 Leu Ser Gln Ser Ile His Leu Leu Glu Glu Asp Asp Ser Leu Tyr  
 410 415 420  
 Cys Ile Ser Ala Trp Asn Asp Gln Gly Tyr Glu His Thr Ala Glu

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Trp Val Leu Arg Arg Ser Leu Tyr Lys	Glu Glu Leu Glu Pro Lys	
455	460	465
Trp Pro Thr Pro Glu Lys Leu Trp Asp	Trp Asp Met Trp Met Arg	
470	475	480
Met Pro Glu Gln Arg Arg Gly Arg Glu	Cys Ile Ile Pro Asp Val	
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Ser Arg Ser Tyr His Phe Gly Ile Val	Gly Leu Asn Met Asn Gly	
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Tyr Phe His Glu Ala Tyr Phe Lys Lys	His Lys Phe Asn Thr Val	
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Pro Gly Val Gln Leu Arg Asn Val Asp	Ser Leu Lys Lys Glu Ala	
530	535	540
Tyr Glu Val Glu Val His Arg Leu Leu	Ser Glu Ala Glu Val Leu	
545	550	555
Asp His Ser Lys Asn Pro Cys Glu Asp	Ser Phe Leu Pro Asp Thr	
560	565	570
Glu Gly His Thr Tyr Val Ala Phe Ile	Arg Met Glu Lys Asp Asp	
575	580	585
Asp Phe Thr Thr Trp Thr Gln Leu Ala	Lys Cys Leu His Ile Trp	
590	595	600
Asp Leu Asp Val Arg Gly Asn His Arg	Gly Leu Trp Arg Leu Phe	
605	610	615
Arg Lys Lys Asn His Phe Leu Val Val	Gly Val Pro Ala Ser Pro	
620	625	630
Tyr Ser Val Lys Lys Pro Pro Ser Val	Thr Pro Ile Phe Leu Glu	
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<210> 89

<211> 25

<212> DNA

<213> Artificial

<220>

<221> Artificial sequence

<222> 1-25

<223> Synthetic construct.

<400> 89

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<210> 90

<211> 22

<212> DNA

<213> Artificial

<220>

<221> Artificial sequence

<222> 1-22

<223> Synthetic construct.

<400> 90

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<210> 91

<211> 24

<212> DNA

<213> Artificial

<220>

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<222> 1-24

<223> Synthetic construct.

<400> 91

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<210> 92

<211> 26

<212> DNA

<213> Artificial

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<221> Artificial sequence

<222> 1-26

<223> Synthetic construct.

<400> 92

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<210> 93

<211> 47

<212> DNA

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<220>

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<222> 1-47

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 35 40 45  
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 50 55 60  
 Ala Leu Tyr Glu Asp Ile Leu Glu Gly Lys His His Gln Ala Ser  
 65 70 75  
 Glu Thr His Asn Val Ile Ala Ser Asp Lys Ala Ala Glu Lys Ser  
 80 85 90  
 Val Val His Glu His Glu His Ser His Asp His Thr Gln Leu His  
 95 100 105  
 Ala Tyr Ile Gly Val Ser Leu Val Leu Gly Phe Val Phe Met Leu  
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 Gly Leu Val Val His Ala Ala Ala Asp Gly Val Ala Leu Gly Ala  
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 Phe Leu Met His Ala Gly Leu Glu Arg Asn Arg Ile Arg Lys His  
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 Tyr Leu Gly Leu Ser Lys Ser Ser Lys Glu Ala Leu Ser Glu Val

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Tyr	Val	Ala	Thr	Val	His	Val	Leu	Pro	Glu	Val	Gly	Gly	Ile	Gly
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His	Ser	His	Lys	Pro	Asp	Ala	Thr	Gly	Gly	Arg	Gly	Leu	Ser	Arg
	275								280					285
Leu	Glu	Val	Ala	Ala	Leu	Val	Leu	Gly	Cys	Leu	Ile	Pro	Leu	Ile
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Leu	Ser	Val	Gly	His	Gln	His								
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<400> 97  
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<212> DNA

<213> Homo sapiens

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$\langle 210 \rangle$  100

<211> 401

<212> PRT

<213> Homo sapiens

 $\langle 400 \rangle$  100

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Asn Tyr Trp Ile Ala Ser Ser Arg Ser Val Asp Leu Gln Thr Arg  
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Gly Ala Val Glu Leu Lys Lys Asn Glu Phe Gln Gly Glu Leu Glu  
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Lys Gln Arg Glu Gln Leu Asp Lys Ile Gln Ser Ser His Asn Phe  
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Gln Leu Glu Ser Val Asn Lys Leu Tyr Gln Asp Glu Lys Ala Val  
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Gln Asp Gln Leu Lys Thr Leu Gln Arg Asn Tyr Gly Arg Leu Gln  
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Lys Phe Ser Tyr Asp Leu Ser Gln Cys Ile Asn Gln Met Lys Glu  
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Gln Arg Gln Gln Leu Gln Ala Leu Ser Glu Pro Gln Pro Arg Leu  
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Gln Ala Ala Gly Leu Pro His Thr Glu Val Pro Gln Gly Lys Gly  
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*[Faint handwritten notes at the bottom of the page]*

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<210> 101
<211> 3671
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 Cys Trp Met Ala Ser Arg Phe Ser Arg Val Val Leu Val Leu Ile  
 65 70 75  
 Asp Ala Leu Arg Phe Asp Phe Ala Gln Pro Gln His Ser His Val  
 80 85 90  
 Pro Arg Glu Pro Pro Val Ser Leu Pro Phe Leu Gly Lys Leu Ser  
 95 100 105  
 Ser Leu Gln Arg Ile Leu Glu Ile Gln Pro His His Ala Arg Leu  
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 Tyr Arg Ser Gln Val Asp Pro Pro Thr Thr Thr Met Gln Arg Leu  
 125 130 135  
 Lys Ala Leu Thr Thr Gly Ser Leu Pro Thr Phe Ile Asp Ala Gly  
 140 145 150  
 Ser Asn Phe Ala Ser His Ala Ile Val Glu Asp Asn Leu Ile Lys  
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 Gln Leu Thr Ser Ala Gly Arg Arg Val Val Phe Met Gly Asp Asp  
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 Thr Trp Lys Asp Leu Phe Pro Gly Ala Phe Ser Lys Ala Phe Phe  
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260	265	270
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275	280	285
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Tyr Ser Pro Thr Ala Val Phe Pro Ser	Thr Pro Pro Glu Glu Pro	
305	310	315
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Leu Pro Thr Val Ile Ala Glu Leu Gln	Gln Phe Leu Arg Gly Ala	
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Met Ala Gly Gly Thr Ala Leu Leu Ala	Ala Ser Cys Phe Ile Cys	
455	460	465
Leu Leu Ala Ser Gln Trp Ala Ile Ser	Pro Gly Phe Pro Phe Cys	
470	475	480
Pro Leu Leu Leu Thr Pro Val Ala Trp	Gly Leu Val Gly Ala Ile	
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Val Leu Leu Gly Ala Val Ala Ala Val Ser Ser Phe Leu Pro Phe  
515 520 525

Leu Trp Lys Ala Trp Ala Gly Trp Gly Ser Lys Arg Pro Leu Ala  
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Thr Leu Phe Pro Ile Pro Gly Pro Val Leu Leu Leu Leu Leu Phe  
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Cys Thr Arg Leu Ala Gly Leu Phe His Arg Cys Pro Glu Glu Thr  
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Pro Val Cys His Ser Ser Pro Trp Leu Ser Pro Leu Ala Ser Met  
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Val Gly Gly Arg Ala Lys Asn Leu Trp Tyr Gly Ala Cys Val Ala  
665 670 675

Ala Leu Val Ala Leu Leu Ala Ala Val Arg Leu Trp Leu Arg Arg  
680 685 690

Tyr Gly Asn Leu Lys Ser Pro Glu Pro Pro Met Leu Phe Val Arg  
695 700 705

Trp Gly Leu Pro Leu Met Ala Leu Gly Thr Ala Ala Tyr Trp Ala  
710 715 720

Leu Ala Ser Gly Ala Asp Glu Ala Pro Pro Arg Leu Arg Val Leu  
725 730 735

Val Ser Gly Ala Ser Met Val Leu Pro Arg Ala Val Ala Gly Leu  
740 745 750

Ala Ala Ser Gly Leu Ala Leu Leu Leu Trp Lys Pro Val Thr Val  
755 760 765

Leu Val Lys Ala Gly Ala Gly Ala Pro Arg Thr Arg Thr Val Leu  
770 775 780

Thr Pro Phe Ser Gly Pro Pro Thr Ser Gln Ala Asp Leu Asp Tyr



785										790					795				
Val	Val	Pro	Gln	Ile 800	Tyr	Arg	His	Met		Gln 805	Glu	Glu	Phe	Arg	Gly 810				
Arg	Leu	Glu	Arg	Thr 815	Lys	Ser	Gln	Gly		Pro 820	Leu	Thr	Val	Ala	Ala 825				
Tyr	Gln	Leu	Gly	Ser 830	Val	Tyr	Ser	Ala		Ala 835	Met	Val	Thr	Ala	Leu 840				
Thr	Leu	Leu	Ala	Phe 845	Pro	Leu	Leu	Leu		Leu 850	His	Ala	Glu	Arg	Ile 855				
Ser	Leu	Val	Phe	Leu 860	Leu	Leu	Phe	Leu		Gln 865	Ser	Phe	Leu	Leu	Leu 870				
His	Leu	Leu	Ala	Ala 875	Gly	Ile	Pro	Val		Thr 880	Thr	Pro	Gly	Pro	Phe 885				
Thr	Val	Pro	Trp	Gln 890	Ala	Val	Ser	Ala		Trp 895	Ala	Leu	Met	Ala	Thr 900				
Gln	Thr	Phe	Tyr	Ser 905	Thr	Gly	His	Gln		Pro 910	Val	Phe	Pro	Ala	Ile 915				
His	Trp	His	Ala	Ala 920	Phe	Val	Gly	Phe		Pro 925	Glu	Gly	His	Gly	Ser 930				
Cys	Thr	Trp	Leu	Pro 935	Ala	Leu	Leu	Val		Gly 940	Ala	Asn	Thr	Phe	Ala 945				
Ser	His	Leu	Leu	Phe 950	Ala	Val	Gly	Cys		Pro 955	Leu	Leu	Leu	Leu	Trp 960				
Pro	Phe	Leu	Cys	Glu 965	Ser	Gln	Gly	Leu		Arg 970	Lys	Arg	Gln	Gln	Pro 975				
Pro	Gly	Asn	Glu	Ala 980	Asp	Ala	Arg	Val		Arg 985	Pro	Glu	Glu	Glu	Glu 990				
Glu	Pro	Leu	Met	Glu 995	Met	Arg	Leu	Arg		Asp 1000	Ala	Pro	Gln	His	Phe 1005				
Tyr	Ala	Ala	Leu	Leu 1010	Gln	Leu	Gly	Leu		Lys 1015	Tyr	Leu	Phe	Ile	Leu 1020				
Gly	Ile	Gln	Ile	Leu 1025	Ala	Cys	Ala	Leu		Ala 1030	Ala	Ser	Ile	Leu	Arg 1035				
Arg	His	Leu	Met	Val 1040	Trp	Lys	Val	Phe		Ala 1045	Pro	Lys	Phe	Ile	Phe 1050				
Glu	Ala	Val	Gly	Phe 1055	Ile	Val	Ser	Ser		Val 1060	Gly	Leu	Leu	Leu	Gly 1065				
Ile	Ala	Leu	Val	Met 1070	Arg	Val	Asp	Gly		Ala 1075	Val	Ser	Ser	Trp	Phe 1080				

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<210> 103

<211> 1743

<212> DNA

<213> Homo sapiens

<400> 103

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cgtgtgtgat	tggttcatgc	atgtaggctc	cttaacaatg	atggtggggc	1650
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<210> 104
<211> 442
<212> PRT
<213> Homo sapiens
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				20					25					30	
Val	Ala	Leu	Thr	Thr	Asp	Glu	Lys	Ser	Ile	Ser	Val	Val	Leu	Thr	
				35					40					45	
Ala	Pro	Glu	Lys	Trp	Lys	Arg	Asn	Pro	Glu	Asp	Leu	Pro	Val	Ser	
				50					55					60	
Met	Gln	Gln	Ile	Tyr	Ser	Asn	Leu	Lys	Tyr	Asn	Val	Ser	Val	Leu	
				65					70					75	
Asn	Thr	Lys	Ser	Asn	Arg	Thr	Trp	Ser	Gln	Cys	Val	Thr	Asn	His	
				80					85					90	
Thr	Leu	Val	Leu	Thr	Trp	Leu	Glu	Pro	Asn	Thr	Leu	Tyr	Cys	Val	
				95					100					105	
His	Val	Glu	Ser	Phe	Val	Pro	Gly	Pro	Pro	Arg	Arg	Ala	Gln	Pro	
				110					115					120	
Ser	Glu	Lys	Gln	Cys	Ala	Arg	Thr	Leu	Lys	Asp	Gln	Ser	Ser	Glu	
				125					130					135	
Phe	Lys	Ala	Lys	Ile	Ile	Phe	Trp	Tyr	Val	Leu	Pro	Ile	Ser	Ile	
				140					145					150	
Thr	Val	Phe	Leu	Phe	Ser	Val	Met	Gly	Tyr	Ser	Ile	Tyr	Arg	Tyr	
				155					160					165	

Ile His Val Gly	Lys Glu Lys His Pro	Ala Asn Leu Ile Leu Ile	170	175	180
Tyr Gly Asn Glu	Phe Asp Lys Arg Phe	Phe Val Pro Ala Glu Lys	185	190	195
Ile Val Ile Asn	Phe Ile Thr Leu Asn	Ile Ser Asp Asp Ser Lys	200	205	210
Ile Ser His Gln	Asp Met Ser Leu Leu	Gly Lys Ser Ser Asp Val	215	220	225
Ser Ser Leu Asn	Asp Pro Gln Pro Ser	Gly Asn Leu Arg Pro Pro	230	235	240
Gln Glu Glu Glu	Glu Val Lys His Leu	Gly Tyr Ala Ser His Leu	245	250	255
Met Glu Ile Phe	Cys Asp Ser Glu Glu	Asn Thr Glu Gly Thr Ser	260	265	270
Leu Thr Gln Gln	Glu Ser Leu Ser Arg	Thr Ile Pro Pro Asp Lys	275	280	285
Thr Val Ile Glu	Tyr Glu Tyr Asp Val	Arg Thr Thr Asp Ile Cys	290	295	300
Ala Gly Pro Glu	Glu Gln Glu Leu Ser	Leu Gln Glu Glu Val Ser	305	310	315
Thr Gln Gly Thr	Leu Leu Glu Ser Gln	Ala Ala Leu Ala Val Leu	320	325	330
Gly Pro Gln Thr	Leu Gln Tyr Ser Tyr	Thr Pro Gln Leu Gln Asp	335	340	345
Leu Asp Pro Leu	Ala Gln Glu His Thr	Asp Ser Glu Glu Gly Pro	350	355	360
Glu Glu Glu Pro	Ser Thr Thr Leu Val	Asp Trp Asp Pro Gln Thr	365	370	375
Gly Arg Leu Cys	Ile Pro Ser Leu Ser	Ser Phe Asp Gln Asp Ser	380	385	390
Glu Gly Cys Glu	Pro Ser Glu Gly Asp	Gly Leu Gly Glu Glu Gly	395	400	405
Leu Leu Ser Arg	Leu Tyr Glu Glu Pro	Ala Pro Asp Arg Pro Pro	410	415	420
Gly Glu Asn Glu	Thr Tyr Leu Met Gln	Phe Met Glu Glu Trp Gly	425	430	435
Leu Tyr Val Gln	Met Glu Asn		440		

<210> 105

<211> 21  
<212> DNA  
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<220>  
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<222> 1-21  
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<400> 105  
cgctgctgct gttgctcctg g 21

<210> 106  
<211> 18  
<212> DNA  
<213> Artificial

<220>  
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<400> 106  
cagtgtgccca ggactttg 18

<210> 107  
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<212> DNA  
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<400> 107  
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<210> 108  
<211> 25  
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<222> 1-25  
<223> Synthetic construct.

<400> 108  
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<210> 109  
<211> 51  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence

<222> 1-51  
 <223> Synthetic construct.

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<210> 110  
 <211> 1114  
 <212> DNA  
 <213> Homo sapiens

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 tctgctgact gtggccaccg ccctgatgct gcccgtaag cccccgcag 150  
 gctcctgggg ggcccagatc atcggggggc acgaggtgac cccccactcc 200  
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<210> 111

<211> 283

<212> PRT

<213> Homo sapiens

<400> 111

Met Gly Leu Gly Leu Arg Gly Trp Gly Arg Pro Leu Leu Thr Val  
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Ala Thr Ala Leu Met Leu Pro Val Lys Pro Pro Ala Gly Ser Trp  
20 25 30

Gly Ala Gln Ile Ile Gly Gly His Glu Val Thr Pro His Ser Arg  
35 40 45

Pro Tyr Met Ala Ser Val Arg Phe Gly Gly Gln His His Cys Gly  
50 55 60

Gly Phe Leu Leu Arg Ala Arg Trp Val Val Ser Ala Ala His Cys  
65 70 75

Phe Ser His Arg Asp Leu Arg Thr Gly Leu Val Val Leu Gly Ala  
80 85 90

His Val Leu Ser Thr Ala Glu Pro Thr Gln Gln Val Phe Gly Ile  
95 100 105

Asp Ala Leu Thr Thr His Pro Asp Tyr His Pro Met Thr His Ala  
110 115 120

Asn Asp Ile Cys Leu Leu Arg Leu Asn Gly Ser Ala Val Leu Gly  
125 130 135

Pro Ala Val Gly Leu Leu Arg Leu Pro Gly Arg Arg Ala Arg Pro  
140 145 150

Pro Thr Ala Gly Thr Arg Cys Arg Val Ala Gly Trp Gly Phe Val  
155 160 165

Ser Asp Phe Glu Glu Leu Pro Pro Gly Leu Met Glu Ala Lys Val  
170 175 180

Arg Val Leu Asp Pro Asp Val Cys Asn Ser Ser Trp Lys Gly His  
185 190 195

Leu Thr Leu Thr Met Leu Cys Thr Arg Ser Gly Asp Ser His Arg  
200 205 210

Arg Gly Phe Cys Ser Ala Asp Ser Gly Gly Pro Leu Val Cys Arg  
215 220 225

Asn Arg Ala His Gly Leu Val Ser Phe Ser Gly Leu Trp Cys Gly  
230 235 240

Asp Pro Lys Thr Pro Asp Val Tyr Thr Gln Val Ser Ala Phe Val  
245 250 255

Ala Trp Ile Trp Asp Val Val Arg Arg Ser Ser Pro Gln Pro Gly  
260 265 270

Pro Leu Pro Gly Thr Thr Arg Pro Pro Gly Glu Ala Ala  
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<210> 112  
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<212> DNA  
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<400> 112  
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<210> 113  
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<222> 1-23  
<223> Synthetic construct.

<400> 113  
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<210> 114  
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<212> DNA  
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<220>  
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<223> Synthetic construct.

<400> 114  
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<210> 115  
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<212> DNA  
<213> Homo sapiens

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<210> 116

<211> 331

<212> PRT

<213> Homo sapiens

<400> 116

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Pro	Ser	Lys	Ala	Thr	Ile	Pro	Gly	Lys	Thr	Val	Ile	Val	Thr	Gly	35	40	45	
Ala	Asn	Thr	Gly	Ile	Gly	Lys	Gln	Thr	Ala	Leu	Glu	Leu	Ala	Arg	50	55	60	
Arg	Gly	Gly	Asn	Ile	Ile	Leu	Ala	Cys	Arg	Asp	Met	Glu	Lys	Cys	65	70	75	
Glu	Ala	Ala	Ala	Lys	Asp	Ile	Arg	Gly	Glu	Thr	Leu	Asn	His	His	80	85	90	
Val	Asn	Ala	Arg	His	Leu	Asp	Leu	Ala	Ser	Leu	Lys	Ser	Ile	Arg	95	100	105	
Glu	Phe	Ala	Ala	Lys	Ile	Ile	Glu	Glu	Glu	Glu	Arg	Val	Asp	Ile	110	115	120	
Leu	Ile	Asn	Asn	Ala	Gly	Val	Met	Arg	Cys	Pro	His	Trp	Thr	Thr	125	130	135	
Glu	Asp	Gly	Phe	Glu	Met	Gln	Phe	Gly	Val	Asn	His	Leu	Gly	His	140	145	150	
Phe	Leu	Leu	Thr	Asn	Leu	Leu	Leu	Asp	Lys	Leu	Lys	Ala	Ser	Ala	155	160	165	
Pro	Ser	Arg	Ile	Ile	Asn	Leu	Ser	Ser	Leu	Ala	His	Val	Ala	Gly	170	175	180	
His	Ile	Asp	Phe	Asp	Asp	Leu	Asn	Trp	Gln	Thr	Arg	Lys	Tyr	Asn	185	190	195	
Thr	Lys	Ala	Ala	Tyr	Cys	Gln	Ser	Lys	Leu	Ala	Ile	Val	Leu	Phe	200	205	210	
Thr	Lys	Glu	Leu	Ser	Arg	Arg	Leu	Gln	Gly	Ser	Gly	Val	Thr	Val	215	220	225	



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cttgaccaca	gggaccaaga	agtggcaatg	aggacacctg	caggagggggc	2050
tagcctgact	cccagaactt	taagactttc	tccccactgc	cttctgctgc	2100
agcccaagca	gggagtgtcc	ccctcccaga	agcatatccc	agatgagtgg	2150

tacattatat aaggattttt ttttaagttga aaacaacttt cttttctttt 2200

tgtatgatgg tttttaaca cagtcattaa aaatgtttat aaatcaaaa 2249

<210> 118

<211> 544

<212> PRT

<213> Homo sapiens

<400> 118

Met	Gly	Pro	Gly	Ala	Arg	Leu	Ala	Ala	Leu	Leu	Ala	Val	Leu	Ala	1	5	10	15
Leu	Gly	Thr	Gly	Asp	Pro	Glu	Arg	Ala	Ala	Ala	Arg	Gly	Asp	Thr	20	25	30	
Phe	Ser	Ala	Leu	Thr	Ser	Val	Ala	Arg	Ala	Leu	Ala	Pro	Glu	Arg	35	40	45	
Arg	Leu	Leu	Gly	Leu	Leu	Arg	Arg	Tyr	Leu	Arg	Gly	Glu	Glu	Ala	50	55	60	
Arg	Leu	Arg	Asp	Leu	Thr	Arg	Phe	Tyr	Asp	Lys	Val	Leu	Ser	Leu	65	70	75	
His	Glu	Asp	Ser	Thr	Thr	Pro	Val	Ala	Asn	Pro	Leu	Leu	Ala	Phe	80	85	90	
Thr	Leu	Ile	Lys	Arg	Leu	Gln	Ser	Asp	Trp	Arg	Asn	Val	Val	His	95	100	105	
Ser	Leu	Glu	Ala	Ser	Glu	Asn	Ile	Arg	Ala	Leu	Lys	Asp	Gly	Tyr	110	115	120	
Glu	Lys	Val	Glu	Gln	Asp	Leu	Pro	Ala	Phe	Glu	Asp	Leu	Glu	Gly	125	130	135	
Ala	Ala	Arg	Ala	Leu	Met	Arg	Leu	Gln	Asp	Val	Tyr	Met	Leu	Asn	140	145	150	
Val	Lys	Gly	Leu	Ala	Arg	Gly	Val	Phe	Gln	Arg	Val	Thr	Gly	Ser	155	160	165	
Ala	Ile	Thr	Asp	Leu	Tyr	Ser	Pro	Lys	Arg	Leu	Phe	Ser	Leu	Thr	170	175	180	
Gly	Asp	Asp	Cys	Phe	Gln	Val	Gly	Lys	Val	Ala	Tyr	Asp	Met	Gly	185	190	195	
Asp	Tyr	Tyr	His	Ala	Ile	Pro	Trp	Leu	Glu	Glu	Ala	Val	Ser	Leu	200	205	210	
Phe	Arg	Gly	Ser	Tyr	Gly	Glu	Trp	Lys	Thr	Glu	Asp	Glu	Ala	Ser	215	220	225	
Leu	Glu	Asp	Ala	Leu	Asp	His	Leu	Ala	Phe	Ala	Tyr	Phe	Arg	Ala	230	235	240	

Gly	Asn	Val	Ser	Cys	Ala	Leu	Ser	Leu	Ser	Arg	Glu	Phe	Leu	Leu	
				245					250					255	
Tyr	Ser	Pro	Asp	Asn	Lys	Arg	Met	Ala	Arg	Asn	Val	Leu	Lys	Tyr	
				260					265					270	
Glu	Arg	Leu	Leu	Ala	Glu	Ser	Pro	Asn	His	Val	Val	Ala	Glu	Ala	
				275					280					285	
Val	Ile	Gln	Arg	Pro	Asn	Ile	Pro	His	Leu	Gln	Thr	Arg	Asp	Thr	
				290					295					300	
Tyr	Glu	Gly	Leu	Cys	Gln	Thr	Leu	Gly	Ser	Gln	Pro	Thr	Leu	Tyr	
				305					310					315	
Gln	Ile	Pro	Ser	Leu	Tyr	Cys	Ser	Tyr	Glu	Thr	Asn	Ser	Asn	Ala	
				320					325					330	
Tyr	Leu	Leu	Leu	Gln	Pro	Ile	Arg	Lys	Glu	Val	Ile	His	Leu	Glu	
				335					340					345	
Pro	Tyr	Ile	Ala	Leu	Tyr	His	Asp	Phe	Val	Ser	Asp	Ser	Glu	Ala	
				350					355					360	
Gln	Lys	Ile	Arg	Glu	Leu	Ala	Glu	Pro	Trp	Leu	Gln	Arg	Ser	Val	
				365					370					375	
Val	Ala	Ser	Gly	Glu	Lys	Gln	Leu	Gln	Val	Glu	Tyr	Arg	Ile	Ser	
				380					385					390	
Lys	Ser	Ala	Trp	Leu	Lys	Asp	Thr	Val	Asp	Pro	Lys	Leu	Val	Thr	
				395					400					405	
Leu	Asn	His	Arg	Ile	Ala	Ala	Leu	Thr	Gly	Leu	Asp	Val	Arg	Pro	
				410					415					420	
Pro	Tyr	Ala	Glu	Tyr	Leu	Gln	Val	Val	Asn	Tyr	Gly	Ile	Gly	Gly	
				425					430					435	
His	Tyr	Glu	Pro	His	Phe	Asp	His	Ala	Thr	Ser	Pro	Ser	Ser	Pro	
				440					445					450	
Leu	Tyr	Arg	Met	Lys	Ser	Gly	Asn	Arg	Val	Ala	Thr	Phe	Met	Ile	
				455					460					465	
Tyr	Leu	Ser	Ser	Val	Glu	Ala	Gly	Gly	Ala	Thr	Ala	Phe	Ile	Tyr	
				470					475					480	
Ala	Asn	Leu	Ser	Val	Pro	Val	Val	Arg	Asn	Ala	Ala	Leu	Phe	Trp	
				485					490					495	
Trp	Asn	Leu	His	Arg	Ser	Gly	Glu	Gly	Asp	Ser	Asp	Thr	Leu	His	
				500					505					510	
Ala	Gly	Cys	Pro	Val	Leu	Val	Gly	Asp	Lys	Trp	Val	Ala	Asn	Lys	
				515					520					525	
Trp	Ile	His	Glu	Tyr	Gly	Gln	Glu	Phe	Arg	Arg	Pro	Cys	Ser	Ser	

Ser Pro Glu Asp

<210> 119  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-23  
<223> Synthetic construct.

<400> 119  
cgggacagga gaccagaaa ggg 23

<210> 120  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 120  
ggccaagtga tccaaggcat cttc 24

<210> 121  
<211> 49  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-49  
<223> Synthetic construct.

<400> 121  
ctgcgggacc tgactagatt ctacgacaag gtactttctt tgcattggg 49

<210> 122  
<211> 1778  
<212> DNA  
<213> Homo sapiens

<400> 122  
gagatagggg gtctggggtt aagttcctgc tccatctcag gagcccctgc 50  
tccccccct aggaagccac cagactccac ggtgtggggc caatcaggtg 100  
gaatcggccc tggcaggtgg ggccacgagc gctggctgag ggaccgagcc 150  
ggagagcccc ggagccccg taaccgcgc ggggagcgcc caggatgccg 200

cgcgggggact	cggagcaggt	gcgctactgc	gcgcgcttct	cctacctctg	250
gctcaagttt	tcacttatca	tctattccac	cgtgttctgg	ctgattgggg	300
ccctggtcct	gtctgtgggc	atctatgcag	aggttgagcg	gcagaaatat	350
aaaacccttg	aaagtgcctt	cctgggtcca	gccatcatcc	tcctcctcct	400
gggcgtcgtc	atgttcatgg	tctccttcat	tggtgtgctg	gcgtccctcc	450
gtgacaacct	gtaccttctc	caagcattca	tgtacatcct	tgggatctgc	500
ctcatcatgg	agctcattgg	tggcgtggtg	gccttgacct	tccggaacca	550
gaccattgac	ttcctgaacg	acaacattcg	aagaggaatt	gagaactact	600
atgatgatct	ggacttcaaa	aacatcatgg	actttgttca	gaaaaagttc	650
aagtgtctgtg	gcgggggagga	ctaccgagat	tggagcaaga	atcagtacca	700
cgactgcagt	gcccttgac	ccttggcctg	tggggtgccc	tacacctgct	750
gcatcaggaa	cacgacagaa	gttgtcaaca	ccatgtgtgg	ctacaaaact	800
atcgacaagg	agcgtttcag	tgtgcaggat	gtcatctacg	tgcggggctg	850
caccaacgcc	gtgatcatct	ggttcatgga	caactacacc	atcatggcgt	900
gcatcctcct	gggcatcctg	cttccccagt	tcctgggggt	gctgctgacg	950
ctgctgtaca	tcacccgggt	ggaggacatc	atcatggagc	actctgtcac	1000
tgatgggctc	ctggggcccg	gtgccaaagg	cagcgtggag	gcggcaggca	1050
cgggatgctg	cttgtgctac	cccaattagg	gccagcctg	ccatggcagc	1100
tccaacaagg	acogtctggg	atagcacctc	tcagtcaaca	tcgtggggct	1150
ggacagggct	gcggccccctc	tgcccacact	cagtactgac	caaagccagg	1200
gctgtgtgtg	cctgtgtgta	ggtcccacgg	cctctgcctc	cccagggagc	1250
agagcctggg	cctcccctaa	gaggctttcc	ccgaggcagc	tctggaatct	1300
gtgcccacct	ggggcctggg	gaacaaggcc	ctcctttctc	caggcctggg	1350
ctacagggga	gggagagcct	gaggctctgc	tcaggggcca	tttcatctct	1400
ggcagtgcct	tggcggtggt	attcaaggca	gttttgtagc	acctgtaatt	1450
ggggagaggg	agtgtgcccc	tcggggcagg	agggaagggc	atctggggaa	1500
gggcaggagg	gaagagctgt	ccatgcagcc	acgcccatgg	ccaggttggc	1550
ctcttctcag	cctcccaggt	gccttgagcc	ctcttgcaag	ggcggtgct	1600
tccttgagcc	tagttttttt	ttacgtgatt	tttgtaacat	tcattttttt	1650





				230					235					240
Ile	Leu	Leu	Pro	Gln 245	Phe	Leu	Gly	Val	Leu 250	Leu	Thr	Leu	Leu	Tyr 255
Ile	Thr	Arg	Val	Glu 260	Asp	Ile	Ile	Met	Glu 265	His	Ser	Val	Thr	Asp 270
Gly	Leu	Leu	Gly	Pro 275	Gly	Ala	Lys	Pro	Ser 280	Val	Glu	Ala	Ala	Gly 285
Thr	Gly	Cys	Cys	Leu 290	Cys	Tyr	Pro	Asn						

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<210> 124
<211> 25
<212> DNA
<213> Artificial
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<220>  
<221> Artificial Sequence  
<222> 1-25  
<223> Synthetic construct.

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<400> 124
atcatctatt ccaccgtggt ctggc 25
```

```
<210> 125
<211> 25
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-25  
<223> Synthetic construct.
```

```
<400> 125
gacagagtgc tccatgatga tqtcc 25
```

```
<210> 126
<211> 50
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-50  
<223> Synthetic construct.
```

<400> 126  
cctgtctgtg ggcattctatg cagaggttga gcggcagaaa tataaaaccc 50

```
<210> 127
<211> 1636
<212> DNA
<213> Homo sapiens
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<400> 127

gaggagcggg ccgaggactc cagcgtgccc aggtctggca tcctgcactt 50  
gctgccctct gacacctggg aagatggccg gcccgaggac cttcaccctt 100  
ctctgtggtt tgctggcagc caccttgatc caagccacc tcagtccac 150  
tgcagttctc atcctcggcc caaaagtcac caaagaaaag ctgacacagg 200  
agctgaagga ccacaacgcc accagcatcc tgcagcagct gccgctgctc 250  
agtgccatgc gggaaaagcc agccggaggc atccctgtgc tgggcagcct 300  
ggtgaacacc gtccctgaagc acatcatctg gctgaaggtc atcacagcta 350  
acatcctcca gctgcagggtg aagccctcgg ccaatgacca ggagctgcta 400  
gtcaagatcc ccctggacat ggtggctgga ttcaacacgc ccctggtcaa 450  
gaccatcgtg gagttccaca tgacgactga ggccaagcc accatccgca 500  
tggacaccag tgcaagtggc cccaccgcc tggctctcag tgactgtgcc 550  
accagccatg ggagcctgag catccaactg ctgtataagc tctccttct 600  
ggtgaacgcc ttagctaagc aggtcatgaa cctcctagtgc ccatccctgc 650  
ccaatctagt gaaaaaccag ctgtgtcccg tgatcgaggc ttccttcaat 700  
ggcatgtatg cagacctcct gcagctggtg aaggtgcca tttccctcag 750  
cattgaccgt ctggagtttg accttctgta tcctgccatc aagggtgaca 800  
ccattcagct ctacctgggg gccaagttgt tggactcaca gggaaagggtg 850  
accaagtggg tcaataactc tgcagcttcc ctgacaatgc ccaccctgga 900  
caacatcccg ttcagcctca tcgtgagtca ggacgtggtg aaagctgcag 950  
tggctgctgt gctctctcca gaagaattca tggctcctgtt ggactctgtg 1000  
cttcctgaga gtgcccacg gctgaagtca agcatcgggc tgatcaatga 1050  
aaaggctgca gataagctgg gatctacca gatcgtgaag atcctaactc 1100  
aggacactcc cgagtttttt atagaccaag gccatgcaa ggtggcccaa 1150  
ctgatcgtgc tggaaagtgt tccctccagt gaagccctcc gccctttgtt 1200  
caccctgggc atcgaagcca gctcgggaagc tcagttttac accaaagggtg 1250  
accaacttat actcaacttg aataacatca gctctgatcg gatccagctg 1300  
atgaactctg ggattggctg gttocaaact gatgttctga aaaacatcat 1350  
cactgagatc atccactcca tcctgctgcc gaaccagaat ggcaaattaa 1400  
gatctggggg cccagtgta ttggtgaagg ccttgggatt cgaggcagct 1450

<210> 128  
<211> 484  
<212> PRT  
<213> Homo sapiens

<400> 128  
Met Ala Gly Pro Trp Thr Phe Thr Leu Leu Cys Gly Leu Leu Ala  
1 5 10 15  
Ala Thr Leu Ile Gln Ala Thr Leu Ser Pro Thr Ala Val Leu Ile  
20 25 30  
Leu Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys  
35 40 45  
Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser  
50 55 60  
Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser  
65 70 75  
Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile  
80 85 90  
Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp  
95 100 105  
Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe  
110 115 120  
Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr  
125 130 135  
Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro  
140 145 150  
Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser His Gly Ser Leu  
155 160 165  
Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu  
170 175 180  
Ala Lys Gln Val Met Asn Leu Leu Val Pro Ser Leu Pro Asn Leu  
185 190 195  
Val Lys Asn Gln Leu Cys Pro Val Ile Glu Ala Ser Phe Asn Gly  
200 205 210  
Met Tyr Ala Asp Leu Leu Gln Leu Val Lys Val Pro Ile Ser Leu  
215 220 225

Ser Ile Asp Arg Leu Glu Phe Asp Leu Leu Tyr Pro Ala Ile Lys  
230 235 240

Gly Asp Thr Ile Gln Leu Tyr Leu Gly Ala Lys Leu Leu Asp Ser  
245 250 255

Gln Gly Lys Val Thr Lys Trp Phe Asn Asn Ser Ala Ala Ser Leu  
260 265 270

Thr Met Pro Thr Leu Asp Asn Ile Pro Phe Ser Leu Ile Val Ser  
275 280 285

Gln Asp Val Val Lys Ala Ala Val Ala Ala Val Leu Ser Pro Glu  
290 295 300

Glu Phe Met Val Leu Leu Asp Ser Val Leu Pro Glu Ser Ala His  
305 310 315

Arg Leu Lys Ser Ser Ile Gly Leu Ile Asn Glu Lys Ala Ala Asp  
320 325 330

Lys Leu Gly Ser Thr Gln Ile Val Lys Ile Leu Thr Gln Asp Thr  
335 340 345

Pro Glu Phe Phe Ile Asp Gln Gly His Ala Lys Val Ala Gln Leu  
350 355 360

Ile Val Leu Glu Val Phe Pro Ser Ser Glu Ala Leu Arg Pro Leu  
365 370 375

Phe Thr Leu Gly Ile Glu Ala Ser Ser Glu Ala Gln Phe Tyr Thr  
380 385 390

Lys Gly Asp Gln Leu Ile Leu Asn Leu Asn Asn Ile Ser Ser Asp  
395 400 405

Arg Ile Gln Leu Met Asn Ser Gly Ile Gly Trp Phe Gln Pro Asp  
410 415 420

Val Leu Lys Asn Ile Ile Thr Glu Ile Ile His Ser Ile Leu Leu  
425 430 435

Pro Asn Gln Asn Gly Lys Leu Arg Ser Gly Val Pro Val Ser Leu  
440 445 450

Val Lys Ala Leu Gly Phe Glu Ala Ala Glu Ser Ser Leu Thr Lys  
455 460 465

Asp Ala Leu Val Leu Thr Pro Ala Ser Leu Trp Lys Pro Ser Ser  
470 475 480

Pro Val Ser Gln

<210> 129  
<211> 2213  
<212> DNA  
<213> Homo sapiens

<400> 129  
gagcgaacat ggcagcgcggt tggcggtttt ggtgtgtctc tgtgaccatg 50  
gtggtggcgc tgctcatcgt ttgcgacgtt ccctcagcct ctgcccacaaag 100  
aaagaaggag atggtgttat ctgaaaagggt tagtcagctg atggaatgga 150  
ctaacaaaag acctgtaata agaataaatg gagacaagtt ccgtcgcctt 200  
gtgaaagccc caccgagaaa ttactccgtt atcgtcatgt tcaactgctct 250  
ccaactgcat agacagtgtg tcgtttgcaa gcaagctgat gaagaattcc 300  
agatcctggc aaactcctgg cgatactcca gtgcattcac caacaggata 350  
ttttttgcca tgggtggattt tgatgaaggc tctgatgtat ttcagatgct 400  
aaacatgaat tcagctccaa ctttcatcaa ctttctgca aaagggaaac 450  
ccaaacgggg tgatacatat gagttacagg tgcgggggtt ttcagctgag 500  
cagattgccc ggtggatcgc cgacagaact gatgtcaata ttagagtgat 550  
tagaccccca aattatgctg gtccccttat gttgggattg cttttggctg 600  
ttattggtgg acttgtgtat cttcgaagaa gtaatatgga atttctcttt 650  
aataaaaactg gatgggcttt tgcagctttg tgttttgtgc ttgctatgac 700  
atctggtcaa atgtggaacc atataagagg accaccatat gcccataaga 750  
atccccacac gggacatgtg aattatatcc atggaagcag tcaagcccag 800  
tttgtagctg aaacacacat tgttcttctg tttaatggtg gagttacctt 850  
aggaatggtg cttttatgtg aagctgctac ctctgacatg gatattggaa 900  
agcgaaagat aatgtgtgtg gctggtattg gacttgttgt attattcttc 950  
agttggatgc tctctatctt tagatctaaa tatcatggct acccatacag 1000  
ctttctgatg agttaaaaag gtcccagaga tatatagaca ctggagtact 1050  
ggaaattgaa aaacgaaaat cgtgtgtgtt tgaaaagaag aatgcaactt 1100  
gtatattttg tattacctct ttttttcaag tgatttaaag agttaatcat 1150  
ttaaccaaag aagatgtgta gtgccttaac aagcaatcct ctgtcaaaat 1200  
ctgaggtatt tgaaaataat taccctctta acctctctt cccagtgaac 1250  
tttatggaac atttaattta gtacaattaa gtatattata aaaattgtaa 1300  
aactactact ttgttttagt tagaacaag ctcaaaacta ctttagtta 1350  
cttggatcatc tgattttata ttgccttata caaagatggg gaaagtaagt 1400  
cctgaccagg tgttcccaca tatgcctgtt acagataact acattaggaa 1450

ttcattctta gcttcttcat ctttgtgtgg atgtgtatac tttacgcac 1500  
 tttccttttg agtagagaaa ttatgtgtgt catgtggtct tctgaaaatg 1550  
 gaacaccatt cttcagagca cacgtctagc cctcagcaag acagttgttt 1600  
 ctctcctcc ttgcatattt cctactgcgc tccagcctga gtgatagagt 1650  
 gagactctgt ctcaaaaaaa agtatctcta aatacaggat tataatttct 1700  
 gcttgagtat ggtgttaact accttgtatt tagaaagatt tcagattcat 1750  
 tccatctcct tagttttctt ttaaggtgac ccatctgtga taaaaatata 1800  
 gcttagtgct aaaatcagtg taacttatac atggcctaaa atgtttctac 1850  
 aaattagagt ttgtcactta ttccatttgt acctaagaga aaaataggct 1900  
 cagttagaaa aggactccct ggccaggcgc agtgacttac gcctgtaatc 1950  
 tcagcacttt gggaggccaa ggcaggcaga tcacgaggtc aggagttcga 2000  
 gaccatcctg gccaacatgg tgaaaccccg tctctactaa aaatataaaa 2050  
 attagctggg tgtggtggca ggagcctgta atcccagcta cacaggaggc 2100  
 tgaggcacga gaatcacttg aactcaggag atggaggttt cagtgagccg 2150  
 agatcacgcc actgcactcc agcctggcaa cagagcgaga ctccatctca 2200  
 aaaaaaaaaa aaa 2213

<210> 130  
 <211> 335  
 <212> PRT  
 <213> Homo sapiens

<400> 130  
 Met Ala Ala Arg Trp Arg Phe Trp Cys Val Ser Val Thr Met Val  
 1 5 10 15  
 Val Ala Leu Leu Ile Val Cys Asp Val Pro Ser Ala Ser Ala Gln  
 20 25 30  
 Arg Lys Lys Glu Met Val Leu Ser Glu Lys Val Ser Gln Leu Met  
 35 40 45  
 Glu Trp Thr Asn Lys Arg Pro Val Ile Arg Met Asn Gly Asp Lys  
 50 55 60  
 Phe Arg Arg Leu Val Lys Ala Pro Pro Arg Asn Tyr Ser Val Ile  
 65 70 75  
 Val Met Phe Thr Ala Leu Gln Leu His Arg Gln Cys Val Val Cys  
 80 85 90  
 Lys Gln Ala Asp Glu Glu Phe Gln Ile Leu Ala Asn Ser Trp Arg  
 95 100 105

Tyr Ser Ser Ala Phe Thr Asn Arg Ile Phe Phe Ala Met Val Asp  
 110 115 120  
 Phe Asp Glu Gly Ser Asp Val Phe Gln Met Leu Asn Met Asn Ser  
 125 130 135  
 Ala Pro Thr Phe Ile Asn Phe Pro Ala Lys Gly Lys Pro Lys Arg  
 140 145 150  
 Gly Asp Thr Tyr Glu Leu Gln Val Arg Gly Phe Ser Ala Glu Gln  
 155 160 165  
 Ile Ala Arg Trp Ile Ala Asp Arg Thr Asp Val Asn Ile Arg Val  
 170 175 180  
 Ile Arg Pro Pro Asn Tyr Ala Gly Pro Leu Met Leu Gly Leu Leu  
 185 190 195  
 Leu Ala Val Ile Gly Gly Leu Val Tyr Leu Arg Arg Ser Asn Met  
 200 205 210  
 Glu Phe Leu Phe Asn Lys Thr Gly Trp Ala Phe Ala Ala Leu Cys  
 215 220 225  
 Phe Val Leu Ala Met Thr Ser Gly Gln Met Trp Asn His Ile Arg  
 230 235 240  
 Gly Pro Pro Tyr Ala His Lys Asn Pro His Thr Gly His Val Asn  
 245 250 255  
 Tyr Ile His Gly Ser Ser Gln Ala Gln Phe Val Ala Glu Thr His  
 260 265 270  
 Ile Val Leu Leu Phe Asn Gly Gly Val Thr Leu Gly Met Val Leu  
 275 280 285  
 Leu Cys Glu Ala Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys  
 290 295 300  
 Ile Met Cys Val Ala Gly Ile Gly Leu Val Val Leu Phe Phe Ser  
 305 310 315  
 Trp Met Leu Ser Ile Phe Arg Ser Lys Tyr His Gly Tyr Pro Tyr  
 320 325 330  
 Ser Phe Leu Met Ser  
 335

<210> 131  
 <211> 2476  
 <212> DNA  
 <213> Homo sapiens

<400> 131  
 aagcaaccaa actgcaagct ttgggagttg ttcgctgtcc ctgccctgct 50  
 ctgctaggga gagaacgcca gagggaggcg gctggcccg cggcaggctc 100



tcagaaccgc taccggcgat gctactgctg tgggtgctcg tggtcgcagc 150  
cttggcgctg gcggtactgg ccccgaggc aggggagcag aggcggagag 200  
cagccaaagc gcccaatgtg gtgctggctg tgagcgactc cttcgatgga 250  
aggttaacat ttcatccagg aagtcaggta gtgaaacttc cttttatcaa 300  
ctttatgaag acacgtggga cttcctttct gaatgcctac acaaactctc 350  
caatttggtg cccatcacgc gcagcaatgt ggagtggcct cttcactcac 400  
ttaacagaat cttggaataa ttttaagggt ctagatccaa attatacaac 450  
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<210> 132
<211> 536
<212> PRT
<213> Homo sapiens
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Val  Leu  Ala  Pro  Gly  Ala  Gly  Glu  Gln  Arg  Arg  Arg  Ala  Ala  Lys
      20      25      30

Ala  Pro  Asn  Val  Val  Leu  Val  Val  Ser  Asp  Ser  Phe  Asp  Gly  Arg
      35      40      45

Leu  Thr  Phe  His  Pro  Gly  Ser  Gln  Val  Val  Lys  Leu  Pro  Phe  Ile
      50      55      60

Asn  Phe  Met  Lys  Thr  Arg  Gly  Thr  Ser  Phe  Leu  Asn  Ala  Tyr  Thr
      65      70      75

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Asn Ser Pro Ile Cys Cys Pro Ser Arg Ala Ala Met Trp Ser Gly  
80 85 90

Leu Phe Thr His Leu Thr Glu Ser Trp Asn Asn Phe Lys Gly Leu  
95 100 105

Asp Pro Asn Tyr Thr Thr Trp Met Asp Val Met Glu Arg His Gly  
110 115 120

Tyr Arg Thr Gln Lys Phe Gly Lys Leu Asp Tyr Thr Ser Gly His  
125 130 135

His Ser Ile Ser Asn Arg Val Glu Ala Trp Thr Arg Asp Val Ala  
140 145 150

Phe Leu Leu Arg Gln Glu Gly Arg Pro Met Val Asn Leu Ile Arg  
155 160 165

Asn Arg Thr Lys Val Arg Val Met Glu Arg Asp Trp Gln Asn Thr  
170 175 180

Asp Lys Ala Val Asn Trp Leu Arg Lys Glu Ala Ile Asn Tyr Thr  
185 190 195

Glu Pro Phe Val Ile Tyr Leu Gly Leu Asn Leu Pro His Pro Tyr  
200 205 210

Pro Ser Pro Ser Ser Gly Glu Asn Phe Gly Ser Ser Thr Phe His  
215 220 225

Thr Ser Leu Tyr Trp Leu Glu Lys Val Ser His Asp Ala Ile Lys  
230 235 240

Ile Pro Lys Trp Ser Pro Leu Ser Glu Met His Pro Val Asp Tyr  
245 250 255

Tyr Ser Ser Tyr Thr Lys Asn Cys Thr Gly Arg Phe Thr Lys Lys  
260 265 270

Glu Ile Lys Asn Ile Arg Ala Phe Tyr Tyr Ala Met Cys Ala Glu  
275 280 285

Thr Asp Ala Met Leu Gly Glu Ile Ile Leu Ala Leu His Gln Leu  
290 295 300

Asp Leu Leu Gln Lys Thr Ile Val Ile Tyr Ser Ser Asp His Gly  
305 310 315

Glu Leu Ala Met Glu His Arg Gln Phe Tyr Lys Met Ser Met Tyr  
320 325 330

Glu Ala Ser Ala His Val Pro Leu Leu Met Met Gly Pro Gly Ile  
335 340 345

Lys Ala Gly Leu Gln Val Ser Asn Val Val Ser Leu Val Asp Ile  
350 355 360

Tyr Pro Thr Met Leu Asp Ile Ala Gly Ile Pro Leu Pro Gln Asn

365	370	375
Leu Ser Gly Tyr Ser Leu Leu Pro Leu	Ser Ser Glu Thr Phe Lys	
380	385	390
Asn Glu His Lys Val Lys Asn Leu His	Pro Pro Trp Ile Leu Ser	
395	400	405
Glu Phe His Gly Cys Asn Val Asn Ala	Ser Thr Tyr Met Leu Arg	
410	415	420
Thr Asn His Trp Lys Tyr Ile Ala Tyr	Ser Asp Gly Ala Ser Ile	
425	430	435
Leu Pro Gln Leu Phe Asp Leu Ser Ser	Asp Pro Asp Glu Leu Thr	
440	445	450
Asn Val Ala Val Lys Phe Pro Glu Ile	Thr Tyr Ser Leu Asp Gln	
455	460	465
Lys Leu His Ser Ile Ile Asn Tyr Pro	Lys Val Ser Ala Ser Val	
470	475	480
His Gln Tyr Asn Lys Glu Gln Phe Ile	Lys Trp Lys Gln Ser Ile	
485	490	495
Gly Gln Asn Tyr Ser Asn Val Ile Ala	Asn Leu Arg Trp His Gln	
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Asp Trp Gln Lys Glu Pro Arg Lys Tyr	Glu Asn Ala Ile Asp Gln	
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Trp Leu Lys Thr His Met Asn Pro Arg	Ala Val	
530	535	

<210> 133  
 <211> 1475  
 <212> DNA  
 <213> Homo sapiens

<400> 133  
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 ctacatccta ggccttctgg ggcttttggg cacactgggt gccatgctgc 200  
 tccccagctg gaaaacaagt tcttatgtcg gtgccagcat tgtgacagca 250  
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 catcaccagc tgtgacatct atagaccct tctgggctg cccgctgaca 350  
 tccaggctgc ccaggccatg atggtgacat ccagtgcaat ctctccctg 400  
 gcctgcatta tctctgtggg gggcatgaga tgcacagtct tctgccagga 450

atcccgagcc aaagacagag tggcggtagc aggtggagtc tttttcatcc 500  
 ttggaggcct cctgggattc attcctgttg cctggaatct tcatgggatac 550  
 ctacgggact tctactcacc actggtgcct gacagcatga aatttgagat 600  
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 ggattgagca aaggcagaaa tgggggctag tgtaacagca tgcagggtga 1000  
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<210> 134  
 <211> 230  
 <212> PRT  
 <213> Homo sapiens

<400> 134  
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 Lys Thr Ser Ser Tyr Val Gly Ala Ser Ile Val Thr Ala Val Gly  
 35 40 45  
 Phe Ser Lys Gly Leu Trp Met Glu Cys Ala Thr His Ser Thr Gly

50	55	60
Ile Thr Gln Cys Asp	Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala	
65	70	75
Asp Ile Gln Ala Ala Gln Ala Met Met	Val Thr Ser Ser Ala Ile	
80	85	90
Ser Ser Leu Ala Cys Ile Ile Ser Val	Val Gly Met Arg Cys Thr	
95	100	105
Val Phe Cys Gln Glu Ser Arg Ala Lys	Asp Arg Val Ala Val Ala	
110	115	120
Gly Gly Val Phe Phe Ile Leu Gly Gly	Leu Leu Gly Phe Ile Pro	
125	130	135
Val Ala Trp Asn Leu His Gly Ile Leu	Arg Asp Phe Tyr Ser Pro	
140	145	150
Leu Val Pro Asp Ser Met Lys Phe Glu	Ile Gly Glu Ala Leu Tyr	
155	160	165
Leu Gly Ile Ile Ser Ser Leu Phe Ser	Leu Ile Ala Gly Ile Ile	
170	175	180
Leu Cys Phe Ser Cys Ser Ser Gln Arg	Asn Arg Ser Asn Tyr Tyr	
185	190	195
Asp Ala Tyr Gln Ala Gln Pro Leu Ala	Thr Arg Ser Ser Pro Arg	
200	205	210
Pro Gly Gln Pro Pro Lys Val Lys Ser	Glu Phe Asn Ser Tyr Ser	
215	220	225
Leu Thr Gly Tyr Val		
230		

<210> 135  
 <211> 610  
 <212> DNA  
 <213> Homo sapiens

<400> 135  
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 aggtgtggag acaagatcta caacccttg gagcagtgt gttacaatga 200  
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 gattttgttg tgaagctgaa gggtcagggt gtgaattccc agtgccactc 350

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 agctccaagc cattgtatgg cccatgtggg agactgatgg gacatggaga 550  
 atgacagtag attatcagga aataaataaa gtgggtttttc caatgtacac 600  
 acctgtaaaa 610

<210> 136  
 <211> 119  
 <212> PRT  
 <213> Homo sapiens

<400> 136  
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                     20                    25                    30  
 Pro Trp Leu Cys Gln Pro Ala Pro Arg Cys Gly Asp Lys Ile Tyr  
                     35                    40                    45  
 Asn Pro Leu Glu Gln Cys Cys Tyr Asn Asp Ala Ile Val Ser Leu  
                     50                    55                    60  
 Ser Glu Thr Arg Gln Cys Gly Pro Pro Cys Thr Phe Trp Pro Cys  
                     65                    70                    75  
 Phe Glu Leu Cys Cys Leu Asp Ser Phe Gly Leu Thr Asn Asp Phe  
                     80                    85                    90  
 Val Val Lys Leu Lys Val Gln Gly Val Asn Ser Gln Cys His Ser  
                     95                    100                    105  
 Ser Pro Ile Ser Ser Lys Cys Glu Ser Arg Arg Arg Phe Pro  
                     110                    115

<210> 137  
 <211> 771  
 <212> DNA  
 <213> Homo sapiens

<400> 137  
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<210> 138  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens.

<400> 138  
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 20 25 30  
 Thr Pro Tyr Leu Met Leu Cys Gln Pro His Lys Arg Cys Gly Asp  
 35 40 45  
 Lys Phe Tyr Asp Pro Leu Gln His Cys Cys Tyr Asp Asp Ala Val  
 50 55 60  
 Val Pro Leu Ala Arg Thr Gln Thr Cys Gly Asn Cys Thr Phe Arg  
 65 70 75  
 Val Cys Phe Glu Gln Cys Cys Pro Trp Thr Phe Met Val Lys Leu  
 80 85 90  
 Ile Asn Gln Asn Cys Asp Ser Ala Arg Thr Ser Asp Asp Arg Leu  
 95 100 105  
 Cys Arg Ser Val Ser  
 110

<210> 139  
 <211> 2044  
 <212> DNA  
 <213> Homo sapiens

<400> 139



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tgggggaaaaa	aaaaaaaaaaa	aaaaaaaaaaa	aaaaaaaaaaa	aaga	2044

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<210> 140
<211> 311
<212> PRT
<213> Homo sapiens
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<400> 140														
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Ser	Leu	Leu	Phe	Ala	Leu	Phe	Leu	Ala	Ala	Ser	Leu	Gly	Pro	Val
				20					25					30
Ala	Ala	Phe	Lys	Val	Ala	Thr	Pro	Tyr	Ser	Leu	Tyr	Val	Cys	Pro
				35					40					45
Glu	Gly	Gln	Asn	Val	Thr	Leu	Thr	Cys	Arg	Leu	Leu	Gly	Pro	Val
				50					55					60
Asp	Lys	Gly	His	Asp	Val	Thr	Phe	Tyr	Lys	Thr	Trp	Tyr	Arg	Ser
				65					70					75
Ser	Arg	Gly	Glu	Val	Gln	Thr	Cys	Ser	Glu	Arg	Arg	Pro	Ile	Arg
				80					85					90
Asn	Leu	Thr	Phe	Gln	Asp	Leu	His	Leu	His	His	Gly	Gly	His	Gln
				95					100					105
Ala	Ala	Asn	Thr	Ser	His	Asp	Leu	Ala	Gln	Arg	His	Gly	Leu	Glu
				110					115					120
Ser	Ala	Ser	Asp	His	His	Gly	Asn	Phe	Ser	Ile	Thr	Met	Arg	Asn
				125					130					135
Leu	Thr	Leu	Leu	Asp	Ser	Gly	Leu	Tyr	Cys	Cys	Leu	Val	Val	Glu

	140		145		150
Ile Arg His His	His Ser Glu His Arg	Val His Gly Ala Met	Glu		
	155	160	165		
Leu Gln Val Gln	Thr Gly Lys Asp Ala	Pro Ser Asn Cys Val	Val		
	170	175	180		
Tyr Pro Ser Ser	Ser Gln Asp Ser Glu	Asn Ile Thr Ala Ala	Ala		
	185	190	195		
Leu Ala Thr Gly	Ala Cys Ile Val Gly	Ile Leu Cys Leu Pro	Leu		
	200	205	210		
Ile Leu Leu Leu	Val Tyr Lys Gln Arg	Gln Ala Ala Ser Asn	Arg		
	215	220	225		
Arg Ala Gln Glu	Leu Val Arg Met Asp	Ser Asn Ile Gln Gly	Ile		
	230	235	240		
Glu Asn Pro Gly	Phe Glu Ala Ser Pro	Pro Ala Gln Gly Ile	Pro		
	245	250	255		
Glu Ala Lys Val	Arg His Pro Leu Ser	Tyr Val Ala Gln Arg	Gln		
	260	265	270		
Pro Ser Glu Ser	Gly Arg His Leu Leu	Ser Glu Pro Ser Thr	Pro		
	275	280	285		
Leu Ser Pro Pro	Gly Pro Gly Asp Val	Phe Phe Pro Ser Leu	Asp		
	290	295	300		
Pro Val Pro Asp	Ser Pro Asn Phe Glu	Val Ile			
	305	310			

<210> 141  
 <211> 1732  
 <212> DNA  
 <213> Homo sapiens

<400> 141  
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 cttagacctc ctttctgccc ctcccttctc gccaccgct gcttctctggc 150  
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gatgtactgc ctgcgctgta cctgctcaga gggcgcccat gtgagttgtt 500  
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agatcttcag tgcccatgag ctgttcccct cccgcctgcc caaccagtgt 700  
gtcctctgca gctgcacaga gggccagatc tactgcggcc tcacaacctg 750  
ccccgaacca ggctgcccag caccctccc actgccagac tctgtctgcc 800  
aagcctgcaa agatgaggca agtgagcaat cggatgaaga ggacagtgtg 850  
cagtcgctcc atggggtgag acatcctcag gatccatgtt ccagtgatgc 900  
tgggagaaag agaggcccg gcacccagc cccactggc ctcagcgccc 950  
ctctgagctt catccctcgc cacttcagac ccaagggagc aggcagcaca 1000  
actgtcaaga tcgtcctgaa ggagaaacat aagaaagcct gtgtgcatgg 1050  
cggaagacg tactcccacg gggaggtgtg gcacccggcc ttccgtgcct 1100  
tcggccctt gccctgcac ctatgcacct gtgaggatgg ccgccaggac 1150  
tgccagcgtg tgacctgtcc caccgagtac ccctgccgtc accccgagaa 1200  
agtggctggg aagtgtgca agatttgccc agaggacaaa gcagaccctg 1250  
gccacagtga gatcagttct accaggtgtc ccaaggcacc gggccgggtc 1300  
ctcgtccaca catcgggtat cccaagccca gacaacctgc gtcgctttgc 1350  
cctggaacac gaggcctcgg acttggtgga gatctacctc tggaagctgg 1400  
taaaagatga ggaaactgag gctcagagag gtgaagtacc tggcccaagg 1450  
ccacacagcc agaatcttcc acttgactca gatcaagaaa gtcaggaagc 1500  
aagacttcca gaaagaggca cagcacttcc gactgctcgc tggccccac 1550  
gaaggctact ggaacgtctt cctagcccag accctggagc tgaaggtcac 1600  
ggccagtcca gacaaagtga ccaagacata acaaagacct aacagttgca 1650  
gatatgagct gtataattgt tggtattata tattaataaa taagaagttg 1700  
cattaccctc aaaaaaaaaa aaaaaaaaaa aa 1732

<210> 142  
<211> 451  
<212> PRT  
<213> Homo sapiens  
<400> 142

Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu Ala  
1 5 10 15

Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp  
20 25 30

Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser  
35 40 45

Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg  
50 55 60

Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His  
65 70 75

Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln  
80 85 90

Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg  
95 100 105

Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His  
110 115 120

Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro  
125 130 135

Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys  
140 145 150

Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro  
155 160 165

Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu  
170 175 180

Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly Val Arg  
185 190 195

His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly  
200 205 210

Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe  
215 220 225

Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val  
230 235 240

Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His Gly  
245 250 255

Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg  
260 265 270

Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly  
275 280 285

Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys

				290					295					300	
Arg	His	Pro	Glu	Lys 305	Val	Ala	Gly	Lys	Cys 310	Cys	Lys	Ile	Cys	Pro 315	
Glu	Asp	Lys	Ala	Asp 320	Pro	Gly	His	Ser	Glu 325	Ile	Ser	Ser	Thr	Arg 330	
Cys	Pro	Lys	Ala	Pro 335	Gly	Arg	Val	Leu	Val 340	His	Thr	Ser	Val	Ser 345	
Pro	Ser	Pro	Asp	Asn 350	Leu	Arg	Arg	Phe	Ala 355	Leu	Glu	His	Glu	Ala 360	
Ser	Asp	Leu	Val	Glu 365	Ile	Tyr	Leu	Trp	Lys 370	Leu	Val	Lys	Asp	Glu 375	
Glu	Thr	Glu	Ala	Gln 380	Arg	Gly	Glu	Val	Pro 385	Gly	Pro	Arg	Pro	His 390	
Ser	Gln	Asn	Leu	Pro 395	Leu	Asp	Ser	Asp	Gln 400	Glu	Ser	Gln	Glu	Ala 405	
Arg	Leu	Pro	Glu	Arg 410	Gly	Thr	Ala	Leu	Pro 415	Thr	Ala	Arg	Trp	Pro 420	
Pro	Arg	Arg	Ser	Leu 425	Glu	Arg	Leu	Pro	Ser 430	Pro	Asp	Pro	Gly	Ala 435	
Glu	Gly	His	Gly	Gln 440	Ser	Arg	Gln	Ser	Asp 445	Gln	Asp	Ile	Thr	Lys 450	

Thr

```
<210> 143
<211> 693
<212> DNA
<213> Homo sapiens
```

```
<400> 143
ctagcctgcg ccaaggggta gtgagaccgc gcggcaacag cttgcggctg 50
cggggagctc ccgtggggcg tccgctggct gtgcaggcgg ccattgattc 100
cttgcggaaa atgctgatct cagtgcgaat gctgggcgca ggggctggcg 150
tgggctacgc gctcctcggt atcgtgaccc cgggagagcg gcggaagcag 200
gaaatgctaa aggagatgcc actgcaggac ccaaggagca gggaggaggc 250
ggccaggacc cagcagctat tgctggccac tctgcaggag gcagcgacca 300
cgcaggagaa cgtggcctgg aggaagaact ggatggttgg cggcgaaggc 350
ggcgccagcg ggaggtcacc gtgagaccgg acttgctctc gtgggcgccc 400
gaccttggct tgggcgcagg aatccgaggc agcctttctc cttcgtgggc 450
```

ccagcggaga gtccggaccg agataccatg ccaggactct ccgggggtcct 500  
 gtgagctgcc gtccgggtgag cacgtttccc ccaaaccctg gactgactgc 550  
 ttttaagggtcc gcaaggcggg ccagggccga gacgcgagtc ggatgtggtg 600  
 aactgaaaga accaataaaa tcatgttcct ccaaaaaaaaaa aaaaaaaaaa 650  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 693

<210> 144  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

<400> 144  
 Met Asp Ser Leu Arg Lys Met Leu Ile Ser Val Ala Met Leu Gly  
 1 5 10 15  
 Ala Gly Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val Thr Pro  
 20 25 30  
 Gly Glu Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu Gln  
 35 40 45  
 Asp Pro Arg Ser Arg Glu Glu Ala Ala Arg Thr Gln Gln Leu Leu  
 50 55 60  
 Leu Ala Thr Leu Gln Glu Ala Ala Thr Thr Gln Glu Asn Val Ala  
 65 70 75  
 Trp Arg Lys Asn Trp Met Val Gly Gly Glu Gly Gly Ala Ser Gly  
 80 85 90  
 Arg Ser Pro

<210> 145  
 <211> 1883  
 <212> DNA  
 <213> Homo sapiens

<400> 145  
 caggagagaa ggcaccgccc ccaccccgcc tccaaagcta accctcgggc 50  
 ttgaggggaa gaggctgact gtacgttcct tctactctgg caccactctc 100  
 caggctgcc a tggggccag caccctctc ctcatcttgt tccttttgtc 150  
 atggtcggga cccctccaag gacagcagca ccaccttggt gagtacatgg 200  
 aacgccgact agctgcttta gaggaacggc tggcccagtg ccaggaccag 250  
 agtagtcggc atgctgctga gctgcgggac ttcaagaaca agatgctgcc 300  
 actgctggag gtggcagaga aggagcggga ggcactcaga actgaggccg 350  
 acaccatctc cgggagagtg gatcgtctgg agcgggaggt agactatctg 400

gagacccaga acccagctct gccctgtgta gagtttgatg agaaggtgac 450  
 tggaggccct gggaccaaag gcaagggaag aaggaatgag aagtacgata 500  
 tgggtgacaga ctgtggctac acaatctctc aagtgagatc aatgaagatt 550  
 ctgaagcgat ttggtggccc agctggtcta tggaccaagg atccactggg 600  
 gcaaacagag aagatctacg tgtttagatgg gacacagaat gacacagcct 650  
 ttgtcttccc aaggetgcgt gacttcaccc ttgccatggc tgcccggaaa 700  
 gcttcccagag tccgggtgcc cttcccctgg gtaggcacag ggcagctggt 750  
 atatggtggc tttctttatt ttgctcggag gcctcctgga agacctggtg 800  
 gaggtggtga gatggagaac actttgcagc taatcaaatt ccacctggca 850  
 aaccgaacag tgggtggacag ctcaagtatc ccagcagagg ggctgatccc 900  
 cccctacggc ttgacagcag acacctacat cgacctggta gctgatgagg 950  
 aaggtctttg ggctgtctat gccacccggg aggatgacag gcacttgtgt 1000  
 ctggccaagt tagatccaca gacactggac acagagcagc agtgggacac 1050  
 accatgtccc agagagaatg ctgaggctgc ctttgtcatc tgtgggaccc 1100  
 tctatgtcgt ctataacacc cgtcctgcca gtcgggcccg catccagtgc 1150  
 tcctttgatg ccagcggcac cctgaccct gaacgggcag cactccctta 1200  
 ttttccccgc agatatggtg cccatgccag cctccgctat aacccccgag 1250  
 aacgccagct ctatgcctgg gatgatggct accagattgt ctataagctg 1300  
 gagatgagga agaaagagga ggaggtttga ggagctagcc ttgttttttg 1350  
 catctttctc actcccatac atttatatta tatccccact aaatttcttg 1400  
 ttctcattc ttcaaagtgt gccagttgt ggctcaaac ctctatatatt 1450  
 ttagccaatg gcaatcaaat tctttcagct cctttgtttc atacggaact 1500  
 ccagatcctg agtaatcctt ttagagcccg aagagtcaaa accctcaatg 1550  
 ttccctcctg ctctcctgcc ccatgtcaac aaatttcagg ctaaggatgc 1600  
 cccagacca gggctctaac cttgtatgcg ggcaggcca gggagcaggc 1650  
 agcagtgttc ttcccctcag agtgacttgg ggaggagaa ataggaggag 1700  
 acgtccagct ctgtcctctc ttctcactc ctcccttcag tgtcctgagg 1750  
 aacaggactt tctccacatt gttttgtatt gcaacatttt gcattaaaag 1800  
 gaaaatccac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1850



*(The following musical notation is transcribed from the image, showing various notes, rests, and bar lines across multiple staves.)*

<210> 146

<211> 406

<212> PRT

<213> Homo sapiens

<400> 146

Met Gly Pro Ser Thr Pro Leu Leu Ile Leu Phe Leu Leu Ser Trp  
1 5 10 15

Ser Gly Pro Leu Gln Gly Gln Gln His His Leu Val Glu Tyr Met  
20 25 30

Glu Arg Arg Leu Ala Ala Leu Glu Glu Arg Leu Ala Gln Cys Gln  
35 40 45

Asp Gln Ser Ser Arg His Ala Ala Glu Leu Arg Asp Phe Lys Asn  
50 55 60

Lys Met Leu Pro Leu Leu Glu Val Ala Glu Lys Glu Arg Glu Ala  
65 70 75

Leu Arg Thr Glu Ala Asp Thr Ile Ser Gly Arg Val Asp Arg Leu  
80 85 90

Glu Arg Glu Val Asp Tyr Leu Glu Thr Gln Asn Pro Ala Leu Pro  
95 100 105

Cys Val Glu Phe Asp Glu Lys Val Thr Gly Gly Pro Gly Thr Lys  
110 115 120

Gly Lys Gly Arg Arg Asn Glu Lys Tyr Asp Met Val Thr Asp Cys  
125 130 135

Gly Tyr Thr Ile Ser Gln Val Arg Ser Met Lys Ile Leu Lys Arg  
140 145 150

Phe Gly Gly Pro Ala Gly Leu Trp Thr Lys Asp Pro Leu Gly Gln  
155 160 165

Thr Glu Lys Ile Tyr Val Leu Asp Gly Thr Gln Asn Asp Thr Ala  
170 175 180

Phe Val Phe Pro Arg Leu Arg Asp Phe Thr Leu Ala Met Ala Ala  
185 190 195

Arg Lys Ala Ser Arg Val Arg Val Pro Phe Pro Trp Val Gly Thr  
200 205 210

Gly Gln Leu Val Tyr Gly Gly Phe Leu Tyr Phe Ala Arg Arg Pro  
215 220 225

Pro Gly Arg Pro Gly Gly Gly Gly Glu Met Glu Asn Thr Leu Gln  
230 235 240

Leu Ile Lys Phe His Leu Ala Asn Arg Thr Val Val Asp Ser Ser  
245 250 255

Val Phe Pro Ala Glu Gly Leu Ile Pro Pro Tyr Gly Leu Thr Ala  
260 265 270

Asp Thr Tyr Ile Asp Leu Val Ala Asp Glu Glu Gly Leu Trp Ala  
275 280 285

Val Tyr Ala Thr Arg Glu Asp Asp Arg His Leu Cys Leu Ala Lys  
290 295 300

Leu Asp Pro Gln Thr Leu Asp Thr Glu Gln Gln Trp Asp Thr Pro  
305 310 315

Cys Pro Arg Glu Asn Ala Glu Ala Ala Phe Val Ile Cys Gly Thr  
320 325 330

Leu Tyr Val Val Tyr Asn Thr Arg Pro Ala Ser Arg Ala Arg Ile  
335 340 345

Gln Cys Ser Phe Asp Ala Ser Gly Thr Leu Thr Pro Glu Arg Ala  
350 355 360

Ala Leu Pro Tyr Phe Pro Arg Arg Tyr Gly Ala His Ala Ser Leu  
365 370 375

Arg Tyr Asn Pro Arg Glu Arg Gln Leu Tyr Ala Trp Asp Asp Gly  
380 385 390

Tyr Gln Ile Val Tyr Lys Leu Glu Met Arg Lys Lys Glu Glu Glu  
395 400 405

Val

<210> 147  
<211> 2052  
<212> DNA  
<213> Homo sapiens

<400> 147  
gacagctgtg tctcgatgga gtagactctc agaacagcgc agtttgccct 50  
ccgctcacgc agagcctctc cgtggcttcc gcaccttgag cattaggcca 100  
gttctcctct tctctctaataat ccacccgtca cctctcctgt catccgtttc 150  
catgccgtga ggtccattca cagaacacat ccatggctct catgctcagt 200  
ttgggttctga gtctcctcaa gctgggatca gggcagtggc aggtgttttg 250  
gccagacaag cctgtccagg ccttggtggg ggaggacgca gcattctcct 300  
gtttcctgtc tcctaagacc aatgcagagg ccatggaagt gcggttcttc 350  
aggggccagt tctctagcgt ggtccacctc tacagggacg ggaaggacca 400  
gccatttatg cagatgccac agtatcaagg caggacaaaa ctggtgaagg 450  
attctattgc ggaggggacg atctctctga ggctggaaaa cattactgtg 500

ttggatgctg gcctctatgg gtgcaggatt agttcccagt cttactacca 550  
 gaaggccatc tgggagctac aggtgtcagc actgggctca gttcctctca 600  
 tttccatcac gggatatgtt gatagagaca tccagctact ctgtcagtc 650  
 tcgggctggt tccccggcc cacagcgaag tggaaaggtc cacaaggaca 700  
 ggatttgtcc acagactcca ggacaaacag agacatgcat ggctgtttg 750  
 atgtggagat ctctctgacc gtccaagaga acgccgggag catatcctgt 800  
 tccatgcggc atgctcatct gagccgagag gtggaatcca gggtagagat 850  
 aggagatacc tttttcgagc ctatatcgtg gcacctggct accaaagtac 900  
 tgggaatact ctgctgtggc ctatTTTTTg gcattgttgg actgaagatt 950  
 ttcttctcca aattccagtg gaaaatccag gcggaactgg actggagaag 1000  
 aaagcacgga caggcagaat tgagagacgc ccggaacac gcagtggagg 1050  
 tgactctgga tccagagacg gctcaccgga agctctgcgt ttctgatctg 1100  
 aaaactgtaa cccatagaaa agctccccag gaggtgcctc actctgagaa 1150  
 gagatttaca aggaagagtg tgggtggcttc tcagagtttc caagcaggga 1200  
 aacattactg ggaggtggac ggaggacaca ataaaagggtg gcgcgtggga 1250  
 gtgtgccggg atgatgtgga caggaggaag gactacgtga ctttgtctcc 1300  
 cgatcatggg tactgggtcc tcagactgaa tggagaacat ttgtatttca 1350  
 cattaaatcc ccgttttacc agcgtcttcc ccaggacccc acctacaaaa 1400  
 ataggggtct tcctggacta tgagtgtggg accatctcct tcttcaacat 1450  
 aaatgaccag tcccttattt ataccctgac atgtcgggtt gaaggcttat 1500  
 tgaggcccta cattgagtat ccgtcctata atgagcaaaa tggaactccc 1550  
 atagtcatct gccagtcac ccaggaatca gagaaagagg cctcttggca 1600  
 aagggcctct gcaatcccag agacaagcaa cagtgagtcc tcctcacagg 1650  
 caaccacgcc cttcctcccc aggggtgaaa ttaggatga atcacatccc 1700  
 acattcttct ttagggatat taaggctctc ctcccagatc caaagtcccc 1750  
 cagcagccgg ccaagggtggc ttccagatga agggggactg gcctgtccac 1800  
 atgggagtca ggtgtcatgg ctgccctgag ctgggaggga agaaggctga 1850  
 cattacattt agtttgcctc cactccatct ggctaagtga tcttgaaata 1900  
 ccacctctca ggtgaagaac cgtcaggaat tcccatctca caggctgtgg 1950

tgtagattaa gtagacaagg aatgtgaata atgcttagat cttattgatg 2000  
acagagtgtg tcttaatggg ttgttcatta tattacactt tcagtaaaaa 2050

aa 2052

<210> 148

<211> 500

<212> PRT

<213> Homo sapiens

<400> 148

Met Ala Leu Met Leu Ser Leu Val Leu Ser Leu Leu Lys Leu Gly  
1 5 10 15

Ser Gly Gln Trp Gln Val Phe Gly Pro Asp Lys Pro Val Gln Ala  
20 25 30

Leu Val Gly Glu Asp Ala Ala Phe Ser Cys Phe Leu Ser Pro Lys  
35 40 45

Thr Asn Ala Glu Ala Met Glu Val Arg Phe Phe Arg Gly Gln Phe  
50 55 60

Ser Ser Val Val His Leu Tyr Arg Asp Gly Lys Asp Gln Pro Phe  
65 70 75

Met Gln Met Pro Gln Tyr Gln Gly Arg Thr Lys Leu Val Lys Asp  
80 85 90

Ser Ile Ala Glu Gly Arg Ile Ser Leu Arg Leu Glu Asn Ile Thr  
95 100 105

Val Leu Asp Ala Gly Leu Tyr Gly Cys Arg Ile Ser Ser Gln Ser  
110 115 120

Tyr Tyr Gln Lys Ala Ile Trp Glu Leu Gln Val Ser Ala Leu Gly  
125 130 135

Ser Val Pro Leu Ile Ser Ile Thr Gly Tyr Val Asp Arg Asp Ile  
140 145 150

Gln Leu Leu Cys Gln Ser Ser Gly Trp Phe Pro Arg Pro Thr Ala  
155 160 165

Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Thr Asp Ser Arg  
170 175 180

Thr Asn Arg Asp Met His Gly Leu Phe Asp Val Glu Ile Ser Leu  
185 190 195

Thr Val Gln Glu Asn Ala Gly Ser Ile Ser Cys Ser Met Arg His  
200 205 210

Ala His Leu Ser Arg Glu Val Glu Ser Arg Val Gln Ile Gly Asp  
215 220 225

Thr Phe Phe Glu Pro Ile Ser Trp His Leu Ala Thr Lys Val Leu

	230		235		240
Gly Ile Leu Cys	Cys Gly Leu Phe Phe	Gly Ile Val Gly Leu	Lys		
	245	250	255		
Ile Phe Phe Ser	Lys Phe Gln Trp Lys	Ile Gln Ala Glu Leu	Asp		
	260	265	270		
Trp Arg Arg Lys	His Gly Gln Ala Glu	Leu Arg Asp Ala Arg	Lys		
	275	280	285		
His Ala Val Glu	Val Thr Leu Asp Pro	Glu Thr Ala His Pro	Lys		
	290	295	300		
Leu Cys Val Ser	Asp Leu Lys Thr Val	Thr His Arg Lys Ala	Pro		
	305	310	315		
Gln Glu Val Pro	His Ser Glu Lys Arg	Phe Thr Arg Lys Ser	Val		
	320	325	330		
Val Ala Ser Gln	Ser Phe Gln Ala Gly	Lys His Tyr Trp Glu	Val		
	335	340	345		
Asp Gly Gly His	Asn Lys Arg Trp Arg	Val Gly Val Cys Arg	Asp		
	350	355	360		
Asp Val Asp Arg	Arg Lys Glu Tyr Val	Thr Leu Ser Pro Asp	His		
	365	370	375		
Gly Tyr Trp Val	Leu Arg Leu Asn Gly	Glu His Leu Tyr Phe	Thr		
	380	385	390		
Leu Asn Pro Arg	Phe Ile Ser Val Phe	Pro Arg Thr Pro Pro	Thr		
	395	400	405		
Lys Ile Gly Val	Phe Leu Asp Tyr Glu	Cys Gly Thr Ile Ser	Phe		
	410	415	420		
Phe Asn Ile Asn	Asp Gln Ser Leu Ile	Tyr Thr Leu Thr Cys	Arg		
	425	430	435		
Phe Glu Gly Leu	Leu Arg Pro Tyr Ile	Glu Tyr Pro Ser Tyr	Asn		
	440	445	450		
Glu Gln Asn Gly	Thr Pro Ile Val Ile	Cys Pro Val Thr Gln	Glu		
	455	460	465		
Ser Glu Lys Glu	Ala Ser Trp Gln Arg	Ala Ser Ala Ile Pro	Glu		
	470	475	480		
Thr Ser Asn Ser	Glu Ser Ser Ser Gln	Ala Thr Thr Pro Phe	Leu		
	485	490	495		
Pro Arg Gly Glu	Met				
	500				

<210> 149  
 <211> 24

$\frac{1}{2} \left( \frac{1}{2} + \frac{1}{2} \right) = \frac{1}{2}$

```
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
```

```
<400> 149
gcgtggtcca cctctacagg gacg 24
```

```
<210> 150
<211> 23
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-23  
<223> Synthetic construct.
```

```
<400> 150
ggaactgacc cagtgctgac acc 23
```

<210>	151
<211>	45
<212>	DNA
<213>	Artificial

```
<220>  
<221> Artificial Sequence  
<222> 1-45  
<223> Synthetic construct.
```

```
<400> 151
gcagatgcc a cagtatcaag gcaggacaaa actggtgaag gattc 45
```

```
<210> 152
<211> 2294
<212> DNA
<213> Homo sapiens
```

<400>	152					
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aatgaatggc	ggagccgagc	gcgccatgag	gagcctgccg	agcctggggc	150	
gcctcgccct	gttgtgctgc	gccgccgccg	ccgccgccgt	cgcctcagcc	200	
gcctcggcgg	ggaatgtcac	cggtggcggc	ggggccgcgg	ggcaggtgga	250	
cgcgtcgccg	ggccccgggt	tgcggggcga	gcccgccac	cccttccta	300	
gggcgacggc	tcccacggcc	caggccccga	ggaccgggcc	cccgcgcgcc	350	
accgtccacc	gaccctggc	tgcgacttct	ccagcccagt	ccccggagac	400	

cacccctctt tgggcgactg ctggaccctc ttccaccacc tttcaggcgc 450  
 cgctcgggcc ctcgccgacc acccctccgg cggcggaacg cacttcgacc 500  
 acctctcagg cgccgaccag acccgcgccg accacccttt cgacgaccac 550  
 tggcccggcg ccgaccaccc ctgtagcgac caccgtaccg gcgcccacga 600  
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 agaccacagg gcagtgtgag tgtcggccag gttatcaggg gcttcactgt 800  
 gaaacctgca aagaggggctt ttacctaaat tacacttctg ggctctgtca 850  
 gccatgtgac tgtagtccac atggagctct cagcataaccg tgcaacagggt 900  
 aagcaacaga ggggtggaact gaagtatttatt ttatttttagc aagggaaaaa 950  
 aaaaggctgc tactctcaag gaccatactg gtttaaacaaggaggatga 1000  
 ggggtcataga ttacaaaaat attttatata cttttattct cttactttat 1050  
 atgtttatatt taatgtcagg atttaaaaaac atctaattta ctgatttagt 1100  
 tcttcaaaag cactagagtc gccaatTTTT ctctgggata attttctgtaa 1150  
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 ttcaggcatg aaacctgcta ggaggtttag aaatgttctt atgtttatta 1250  
 atataccatt ggagtttgag gaaatttggt gtttggttta tttttctctc 1300  
 taatcaaaat tctacatttg tttctttgga catctaaagc ttaacctggg 1350  
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 taccagtaca tttttgagac caaaagtaga ttaagcagga attatcttta 1450  
 aactattatg ttatttgagg gtaatttaat ctagtggaat aatgtactgt 1500  
 tatctaagca tttgccttgt actgcactga aagtaattat tctttgacct 1550  
 tatgtgaggc acttggtttt ttgtggaccc caagtcaaaa aactgaagag 1600  
 acagtattaa ataataaaaa aaataatgac aggttatact cagtgttaacc 1650  
 tgggtataac ccaagatctg ctgccactta cgagctgtgt tccttgggca 1700  
 agtaatttcc tttcactgag cttgtttctt ctcaagggtt ttgtgaagat 1750  
 taaatgagtt gatatatata aaatgcctag cacatgtcac tcaataaatt 1800  
 ctggtttggt ttaatttcaa aggaatatta tggactgaaa tgagagaaca 1850

tgttttaaga acttttagct ccttgacaaa gaagtgtttt atacttttagc 1900  
 actaaatatt ttaaagtctt tataaatgat attatactgt tatggaatat 1950  
 tgtatcatat tgtagtttat taaaaatgta gaagaggctg ggcgcggtgg 2000  
 ctcacgcctg taatcctagc actttgggag gccaaaggcg gtggatcact 2050  
 tgaggccagg agttctagat gagcctggcc agcacagtga aaccccgctc 2100  
 ctactaaaaa tacaacaaa ttagctgggc gtggtggcac acacctgtag 2150  
 tcccagctac tcgggaggct gaggcaggag aatcggttga acccgggagg 2200  
 tggaggttgc agtgagctga gatcgcgcca ctgcactcca gcctggtgag 2250  
 agaggggagac tctgtcttaa aaaaaaaaaa aaaaaaaaaa aaaa 2294

<210> 153  
 <211> 258  
 <212> PRT  
 <213> Homo sapiens

<400> 153  
 Met Arg Ser Leu Pro Ser Leu Gly Gly Leu Ala Leu Leu Cys Cys  
 1 5 10 15  
 Ala Ala Ala Ala Ala Val Ala Ser Ala Ala Ser Ala Gly Asn  
 20 25 30  
 Val Thr Gly Gly Gly Gly Ala Ala Gly Gln Val Asp Ala Ser Pro  
 35 40 45  
 Gly Pro Gly Leu Arg Gly Glu Pro Ser His Pro Phe Pro Arg Ala  
 50 55 60  
 Thr Ala Pro Thr Ala Gln Ala Pro Arg Thr Gly Pro Pro Arg Ala  
 65 70 75  
 Thr Val His Arg Pro Leu Ala Ala Thr Ser Pro Ala Gln Ser Pro  
 80 85 90  
 Glu Thr Thr Pro Leu Trp Ala Thr Ala Gly Pro Ser Ser Thr Thr  
 95 100 105  
 Phe Gln Ala Pro Leu Gly Pro Ser Pro Thr Thr Pro Pro Ala Ala  
 110 115 120  
 Glu Arg Thr Ser Thr Thr Ser Gln Ala Pro Thr Arg Pro Ala Pro  
 125 130 135  
 Thr Thr Leu Ser Thr Thr Thr Gly Pro Ala Pro Thr Thr Pro Val  
 140 145 150  
 Ala Thr Thr Val Pro Ala Pro Thr Thr Pro Arg Thr Pro Thr Pro  
 155 160 165  
 Asp Leu Pro Ser Ser Ser Asn Ser Ser Val Leu Pro Thr Pro Pro





```
<210> 157
<211> 689
<212> DNA
<213> Homo sapiens
```

<400> 157					
tgcggcgag	tgtagacctg	ggaggatggg	cggcctgctg	ctggctgctt	50
ttctggcttt	ggtctcgggtg	cccagggccc	aggccgtgtg	gttgggaaga	100
ctggaccctg	agcagcttct	tgggccctgg	tacgtgcttg	cggtggcctc	150
ccgggaaaag	ggctttgcc	tggagaagga	catgaagaac	gtcgtggggg	200
tggtggtgac	cctcactcca	gaaaacaacc	tgcggacgct	gtcctctcag	250
cacgggctgg	gagggtgtga	ccagagtgtc	atggacctga	taaagcgaaa	300
ctccggatgg	gtgtttgaga	atccctcaat	aggcgtgctg	gagctctggg	350
tgctggccac	caacttcaga	gactatgcc	tcattctcac	tcagctggag	400
ttcggggacg	agcccttcaa	caccgtggag	ctgtacagtc	tjacggagac	450
agccagccag	gaggccatgg	ggctcttcac	caagtggagc	aggagcctgg	500
gcttcctgtc	acagtagcag	gccagctgc	agaaggacct	cacctgtgct	550
cacaagatcc	ttctgtgagt	gctgcgtccc	cagtagggat	ggcgcccaca	600
gggtcctgtg	acctcgcca	gtgtccaccc	acctcgctca	gcggctcccg	650
gggcccagca	ccagctcaga	ataaagcgat	tccacaqca		689

```
<210> 158
<211> 163
<212> PRT
<213> Homo sapiens
```

```

<400> 158
Met Gly Gly Leu Leu Leu Ala Ala Phe Leu Ala Leu Val Ser Val
 1          5          10          15

Pro Arg Ala Gln Ala Val Trp Leu Gly Arg Leu Asp Pro Glu Gln
          20          25          30

Leu Leu Gly Pro Trp Tyr Val Leu Ala Val Ala Ser Arg Glu Lys
          35          40          45

Gly Phe Ala Met Glu Lys Asp Met Lys Asn Val Val Gly Val Val
          50          55          60

Val Thr Leu Thr Pro Glu Asn Asn Leu Arg Thr Leu Ser Ser Gln
          65          70          75

His Gly Leu Gly Gly Cys Asp Gln Ser Val Met Asp Leu Ile Lys
          80          85          90

```

Arg	Asn	Ser	Gly	Trp	Val	Phe	Glu	Asn	Pro	Ser	Ile	Gly	Val	Leu
				95					100					105
Glu	Leu	Trp	Val	Leu	Ala	Thr	Asn	Phe	Arg	Asp	Tyr	Ala	Ile	Ile
				110					115					120
Phe	Thr	Gln	Leu	Glu	Phe	Gly	Asp	Glu	Pro	Phe	Asn	Thr	Val	Glu
				125					130					135
Leu	Tyr	Ser	Leu	Thr	Glu	Thr	Ala	Ser	Gln	Glu	Ala	Met	Gly	Leu
				140					145					150
Phe	Thr	Lys	Trp	Ser	Arg	Ser	Leu	Gly	Phe	Leu	Ser	Gln		
				155					160					

<210> 159  
 <211> 1665  
 <212> DNA  
 <213> Homo sapiens

<400> 159  
 aacagacggt cctcgcggc cctggcacct ctaaccccag acatgctgct 50  
 gctgctgctg cccctgctct gggggaggga gagggcggaa ggacagacaa 100  
 gtaaactgct gacgatgcag agttccgtga cgggtgcagga aggcctgtgt 150  
 gtccatgtgc cctgctcctt ctccctacccc tcgcatggct ggatttacct 200  
 tggcccagta gttcatggct actggttccg ggaagggggc aatacagacc 250  
 aggatgctcc agtggccaca aacaacccag ctccgggcagt gtgggaggag 300  
 actcgggacc gattccacct ccttggggac ccacatacca agaattgcac 350  
 cctgagcatc agagatgcc aagaagtga tgcggggaga tacttctttc 400  
 gtatggagaa aggaagtata aaatggaatt ataaacatca ccggtctct 450  
 gtgaatgtga cagccttgac ccacaggccc aacatcctca tcccaggcac 500  
 cctggagtcc ggctgcccc agaatctgac ctgctctgtg ccctgggcct 550  
 gtgagcaggg gacaccccct atgatctcct ggataggac ctccgtgtcc 600  
 cccctggacc cctccaccac ccgctcctcg gtgtcacc tcaccccaca 650  
 gcccaggac catggcacca gcctcacctg tcaggtgacc ttccctgggg 700  
 ccagcgtgac cacgaacaag accgtccatc tcaacgtgtc ctacccgcct 750  
 cagaacttga ccatgactgt cttccaagga gacggcacag tatccacagt 800  
 cttgggaaat ggctcatctc tgtcactccc agaggggcag tctctgcgcc 850  
 tggctctgtc agttgatgca gttgacagca atccccctgc caggctgagc 900  
 ctgagctgga gaggcctgac cctgtgcccc tcacagccct caaacccggg 950

ggtgctggag ctgccttggg tgcacctgag ggatgcagct gaattcacct 1000  
 gcagagctca gaacctctc ggctctcagc aggtctacct gaacgtctcc 1050  
 ctgcagagca aagccacatc aggagtgact caggggggtgg tcggggggagc 1100  
 tggagccaca gccctggtct tcctgtcctt ctgcgtcatc ttogttgtag 1150  
 tgaggtcctg caggaagaaa tcggcaaggc cagcagcggg cgtggggagat 1200  
 acgggcatag aggatgcaaa cgctgtcagg ggttcagcct ctcagggggcc 1250  
 cctgactgaa ccttgggcag aagacagtcc cccagaccag cctccccccag 1300  
 cttctgcccg ctcctcagtg ggggaaggag agctccagta tgcattccctc 1350  
 agcttccaga tggtaagcc ttgggactcg cggggacagg aggccactga 1400  
 caccgagtac tcggagatca agatccacag atgagaaact gcagagactc 1450  
 accctgattg agggatcaca gccctccag gcaagggaga agtcagaggc 1500  
 tgattcttgt agaattaaca gccctcaacg tgatgagcta tgataaact 1550  
 atgaattatg tgcagagtga aaagcacaca ggcttttagag tcaaagtatc 1600  
 tcaaacctga atccacactg tgccctccct tttatttttt taactaaaag 1650  
 acagacaaat tccta 1665

<210> 160  
 <211> 463  
 <212> PRT  
 <213> Homo sapiens

<400> 160  
 Met Leu Leu Leu Leu Leu Pro Leu Leu Trp Gly Arg Glu Arg Ala  
 1 5 10 15  
 Glu Gly Gln Thr Ser Lys Leu Leu Thr Met Gln Ser Ser Val Thr  
 20 25 30  
 Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser Phe Ser Tyr  
 35 40 45  
 Pro Ser His Gly Trp Ile Tyr Pro Gly Pro Val Val His Gly Tyr  
 50 55 60  
 Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala  
 65 70 75  
 Thr Asn Asn Pro Ala Arg Ala Val Trp Glu Glu Thr Arg Asp Arg  
 80 85 90  
 Phe His Leu Leu Gly Asp Pro His Thr Lys Asn Cys Thr Leu Ser  
 95 100 105  
 Ile Arg Asp Ala Arg Arg Ser Asp Ala Gly Arg Tyr Phe Phe Arg

Met Glu Lys Gly Ser Ile Lys Trp Asn Tyr Lys His His Arg Leu	110	115	120
125 130 135			
Ser Val Asn Val Thr Ala Leu Thr His Arg Pro Asn Ile Leu Ile	140	145	150
Pro Gly Thr Leu Glu Ser Gly Cys Pro Gln Asn Leu Thr Cys Ser	155	160	165
Val Pro Trp Ala Cys Glu Gln Gly Thr Pro Pro Met Ile Ser Trp	170	175	180
Ile Gly Thr Ser Val Ser Pro Leu Asp Pro Ser Thr Thr Arg Ser	185	190	195
Ser Val Leu Thr Leu Ile Pro Gln Pro Gln Asp His Gly Thr Ser	200	205	210
Leu Thr Cys Gln Val Thr Phe Pro Gly Ala Ser Val Thr Thr Asn	215	220	225
Lys Thr Val His Leu Asn Val Ser Tyr Pro Pro Gln Asn Leu Thr	230	235	240
Met Thr Val Phe Gln Gly Asp Gly Thr Val Ser Thr Val Leu Gly	245	250	255
Asn Gly Ser Ser Leu Ser Leu Pro Glu Gly Gln Ser Leu Arg Leu	260	265	270
Val Cys Ala Val Asp Ala Val Asp Ser Asn Pro Pro Ala Arg Leu	275	280	285
Ser Leu Ser Trp Arg Gly Leu Thr Leu Cys Pro Ser Gln Pro Ser	290	295	300
Asn Pro Gly Val Leu Glu Leu Pro Trp Val His Leu Arg Asp Ala	305	310	315
Ala Glu Phe Thr Cys Arg Ala Gln Asn Pro Leu Gly Ser Gln Gln	320	325	330
Val Tyr Leu Asn Val Ser Leu Gln Ser Lys Ala Thr Ser Gly Val	335	340	345
Thr Gln Gly Val Val Gly Gly Ala Gly Ala Thr Ala Leu Val Phe	350	355	360
Leu Ser Phe Cys Val Ile Phe Val Val Val Arg Ser Cys Arg Lys	365	370	375
Lys Ser Ala Arg Pro Ala Ala Gly Val Gly Asp Thr Gly Ile Glu	380	385	390
Asp Ala Asn Ala Val Arg Gly Ser Ala Ser Gln Gly Pro Leu Thr	395	400	405

Glu	Pro	Trp	Ala	Glu 410	Asp	Ser	Pro	Pro	Asp 415	Gln	Pro	Pro	Pro	Ala 420
Ser	Ala	Arg	Ser	Ser 425	Val	Gly	Glu	Gly	Glu 430	Leu	Gln	Tyr	Ala	Ser 435
Leu	Ser	Phe	Gln	Met 440	Val	Lys	Pro	Trp	Asp 445	Ser	Arg	Gly	Gln	Glu 450
Ala	Thr	Asp	Thr	Glu 455	Tyr	Ser	Glu	Ile	Lys 460	Ile	His	Arg		

```
<210> 161
<211> 739
<212> DNA
<213> Homo sapiens
```

```

<400> 161
gacgcccagt gacctgccga ggtcggcgac acagagctct ggagatgaag 50
accctgttcc tgggtgtcac gctcggcctg gccgctgccc tgtccttcac 100
cctggaggag gaggatatca cagggacctg gtacgtgaag gccatggtgg 150
tcgataagga ctttccggag gacaggaggc ccaggaaggt gtccccagtg 200
aaggtgacag ccctgggcgg tgggaagttg gaagccacgt tcaccttcac 250
gagggaggat cggtgcatcc agaagaaaat cctgatgcgg aagacggagg 300
agcctggcaa atacagcgcc tatgggggca ggaagctcat gtacctgcag 350
gagctgcca ggagggacca ctacatcttt tactgcaaag accagcacca 400
tgggggcctg ctccacatgg gaaagcttgt gggtaggaat tctgatacca 450
accgggaggc cctggaagaa tttaagaaat tgggtgcagcg caagggactc 500
tcggaggagg acattttcac gccctgcag acgggaagct gcgttcccga 550
aactaggca gccccgggt ctgcacctcc agagcccacc ctaccaccag 600
acacagagcc cggaccacct ggacctacc tccagccatg acccttcctt 650
gtcccaccc acctgactcc aaataaagtc cttttccccc aaaaaaaaaa 700
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 739

```

```
<210> 162
<211> 170
<212> PRT
<213> Homo sapiens
```

168

20	25	30
Val Lys Ala Met Val Val Asp Lys Asp Phe Pro Glu Asp Arg Arg		
35	40	45
Pro Arg Lys Val Ser Pro Val Lys Val Thr Ala Leu Gly Gly Gly		
50	55	60
Lys Leu Glu Ala Thr Phe Thr Phe Met Arg Glu Asp Arg Cys Ile		
65	70	75
Gln Lys Lys Ile Leu Met Arg Lys Thr Glu Glu Pro Gly Lys Tyr		
80	85	90
Ser Ala Tyr Gly Gly Arg Lys Leu Met Tyr Leu Gln Glu Leu Pro		
95	100	105
Arg Arg Asp His Tyr Ile Phe Tyr Cys Lys Asp Gln His His Gly		
110	115	120
Gly Leu Leu His Met Gly Lys Leu Val Gly Arg Asn Ser Asp Thr		
125	130	135
Asn Arg Glu Ala Leu Glu Glu Phe Lys Lys Leu Val Gln Arg Lys		
140	145	150
Gly Leu Ser Glu Glu Asp Ile Phe Thr Pro Leu Gln Thr Gly Ser		
155	160	165
Cys Val Pro Glu His		
170		

<210> 163  
 <211> 22  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-22  
 <223> Synthetic construct.

<400> 163  
 ggagatgaag accctgttcc tg 22

<210> 164  
 <211> 26  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-26  
 <223> Synthetic construct.

<400> 164  
 ggagatgaag accctgttcc tgggtg 26

```
<210> 165
<211> 21
<212> DNA
<213> Artificial
```

```
<220>
<221> Artificial Sequence
<222> 1-21
<223> Synthetic construct.
```

```
<400> 165
gtcctccgga aagtccttat c 21
```

```
<210> 166
<211> 25
<212> DNA
<213> Artificial
```

```
<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
```

```
<400> 166
gcctagtgtt cgggaacgca qcttc 25
```

```
<210> 167
<211> 50
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-50  
<223> Synthetic construct.
```

<400> 167  
cagggacctg gtacgtgaag gccatggtgg tcgataagga ctttccggag 50

```
<210> 168
<211> 45
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-45  
<223> Synthetic construct.
```

```
<400> 168
ctgtccttca ccctggagga ggaggatatc acagggacct ggtac 45
```

```
<210> 169
<211> 1204
<212> DNA
<213> Homo sapiens
```



gttcgcgaga	tgcagaggtt	gaggtggctg	cgggactgga	agtcacgcgg	50
cagaggtctc	acagcagcca	aggaacctgg	ggcccgcctc	tccccctcc	100
aggccatgag	gattctgcag	ttaatcctgc	ttgctctggc	aacagggctt	150
gtagggggag	agaccaggat	catcaagggg	ttcgagtgca	agcctcactc	200
ccagccctgg	caggcagccc	tggtcgagaa	gacgcggcta	ctctgtgggg	250
cgacgctcat	cgccccca	tggctcctga	cagcagccca	ctgcctcaag	300
ccccgctaca	tagttcacct	ggggcagcac	aacctccaga	aggaggaggg	350
ctgtgagcag	acccggacag	ccactgagtc	cttccccac	cccggcttca	400
acaacagcct	ccccaaaca	gaccaccgca	atgacatcat	gctggtgaag	450
atggcatcgc	cagtctccat	cacctgggct	gtgcgacccc	tcacctctc	500
ctcacgctgt	gtcactgctg	gcaccagctg	cctcatttcc	ggctggggca	550
gcacgtccag	ccccagtta	cgcttgctc	acaccttgcg	atgcgccaac	600
atcaccatca	ttgagcacca	gaagtgtgag	aacgcctacc	ccggcaacat	650
cacagacacc	atggtgtgtg	ccagcgtgca	ggaagggggc	aaggactcct	700
gccagggtag	ctccgggggc	cctctggtct	gtaaccagtc	tcttcaaggc	750
attatctcct	ggggccagga	tccgtgtgcg	atcacccgaa	agcctggtgt	800
ctacacgaaa	gtctgcaa	atgtggactg	gatccaggag	acgatgaaga	850
acaattagac	tggaccacc	caccacagcc	catcacctc	catttccact	900
tggtgtttgg	ttcctgttca	ctctgtta	aagaaaccct	aagccaagac	950
cctctacgaa	cattctttgg	gcctcctgga	ctacaggaga	tgctgtcact	1000
taataatcaa	cctgggggtc	gaaatcagtg	agacctggat	tcaaattctg	1050
ccttgaaata	ttgtgactct	gggaatgaca	acacctgggt	tgttctctgt	1100
tgtaccccca	gccccaaaga	cagctcctgg	ccatataatca	aggtttcaat	1150
aaatatttgc	taaatgaaaa	aaaaaaaaa	aaaaaaaaa	aaaaaaaaa	1200
aaaa	1204				

```
<210> 170
<211> 250
<212> PRT
<213> Homo sapiens
```

```
<400> 170
Met Arg Ile Leu Gln Leu Ile Leu Leu Ala Leu Ala Thr Gly Leu
  1             5             10             15
```

Val	Gly	Gly	Glu	Thr 20	Arg	Ile	Ile	Lys	Gly 25	Phe	Glu	Cys	Lys	Pro 30
His	Ser	Gln	Pro	Trp 35	Gln	Ala	Ala	Leu	Phe 40	Glu	Lys	Thr	Arg	Leu 45
Leu	Cys	Gly	Ala	Thr 50	Leu	Ile	Ala	Pro	Arg 55	Trp	Leu	Leu	Thr	Ala 60
Ala	His	Cys	Leu	Lys 65	Pro	Arg	Tyr	Ile	Val 70	His	Leu	Gly	Gln	His 75
Asn	Leu	Gln	Lys	Glu 80	Glu	Gly	Cys	Glu	Gln 85	Thr	Arg	Thr	Ala	Thr 90
Glu	Ser	Phe	Pro	His 95	Pro	Gly	Phe	Asn	Asn 100	Ser	Leu	Pro	Asn	Lys 105
Asp	His	Arg	Asn	Asp 110	Ile	Met	Leu	Val	Lys 115	Met	Ala	Ser	Pro	Val 120
Ser	Ile	Thr	Trp	Ala 125	Val	Arg	Pro	Leu	Thr 130	Leu	Ser	Ser	Arg	Cys 135
Val	Thr	Ala	Gly	Thr 140	Ser	Cys	Leu	Ile	Ser 145	Gly	Trp	Gly	Ser	Thr 150
Ser	Ser	Pro	Gln	Leu 155	Arg	Leu	Pro	His	Thr 160	Leu	Arg	Cys	Ala	Asn 165
Ile	Thr	Ile	Ile	Glu 170	His	Gln	Lys	Cys	Glu 175	Asn	Ala	Tyr	Pro	Gly 180
Asn	Ile	Thr	Asp	Thr 185	Met	Val	Cys	Ala	Ser 190	Val	Gln	Glu	Gly	Gly 195
Lys	Asp	Ser	Cys	Gln 200	Gly	Asp	Ser	Gly	Gly 205	Pro	Leu	Val	Cys	Asn 210
Gln	Ser	Leu	Gln	Gly 215	Ile	Ile	Ser	Trp	Gly 220	Gln	Asp	Pro	Cys	Ala 225
Ile	Thr	Arg	Lys	Pro 230	Gly	Val	Tyr	Thr	Lys 235	Val	Cys	Lys	Tyr	Val 240
Asp	Trp	Ile	Gln	Glu 245	Thr	Met	Lys	Asn	Asn 250					

```
<210> 171
<211> 25
<212> DNA
<213> Artificial

<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
```

```
<400> 171
ggctgcgggg ctggaagtca tcggg 25
```

```
<210> 172
<211> 24
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.
```

```
<400> 172
ctccaggcca tgaggattct gcag 24
```

```
<210> 173
<211> 18
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-18  
<223> Synthetic construct.
```

<400> 173  
cctctggtct gtaaccag 18

```
<210> 174
<211> 24
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.
```

```
<400> 174
tctgtgatgt tgccggggta ggcg 24
```

```
<210> 175
<211> 25
<212> DNA
<213> Artificial
```

```
<220>  
<221> Artificial Sequence  
<222> 1-25  
<223> Synthetic construct.
```

```
<400> 175
  cgtgtagaca ccaggctttc gggtg 25
```

<210>	176
<211>	18
<212>	DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-18

<223> Synthetic construct.

<400> 176

cccttgatga tcctgggc 18

<210> 177

<211> 50

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-50

<223> Synthetic construct.

<400> 177

aggccatgag gattctgcag ttaatcctgc ttgctctggc aacagggctt 50

<210> 178

<211> 43

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-43

<223> Synthetic construct.

<400> 178

gagagaccag gatcatcaag gggttcgagt gcaagcctca etc 43

<210> 179

<211> 907

<212> DNA

<213> Homo sapiens

<400> 179

gagcagtgtt ctgctggagc cgatgccaaa aaccatgcat ttcttattca 50

gattcattgt tttcttttat ctgtggggcc tttttactgc tcagagacaa 100

aagaaagagg agagcaccga agaagtgaaa atagaagttt tgcacgtcc 150

agaaaactgc tctaagacaa gcaagaaggg agacctacta aatgcccatt 200

atgacggcta cctggctaaa gacggctcga aattctactg cagccggaca 250

caaaatgaag gccaccccaa atggtttggt cttggtgttg ggcaagtcac 300

aaaaggccta gacattgcta tgacagatat gtgccctgga gaaaagcgaa 350

aagtagttat acccccttca tttgcatacg gaaaggaagg ctatgcagaa 400

ggaagattc caccgatgc tacattgatt tttgagattg aactttatgc 450  
 tgtgacaaa ggaccacgga gcattgagac atttaaaca atagacatgg 500  
 acaatgacag gcagctctct aaagccgaga taaacctcta cttgcaaagg 550  
 gaatttgaaa aagatgagaa gccacgtgac aagtcatatc aggatgcagt 600  
 tttagaagat atttttaaga agaatgacca tgatgggtgat ggcttcattt 650  
 ctcccaagga atacaatgta taccaacacg atgaactata gcatatttgt 700  
 atttctactt ttttttttta gctattttact gtactttatg tataaaacaa 750  
 agtcactttt ctccaagttg tatttgctat ttttccccta tgagaagata 800  
 ttttgatctc cccaatacat tgattttggt ataataaatg tgaggctggt 850  
 ttgcaaactt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900  
 aaaaaaa 907

<210> 180  
 <211> 222  
 <212> PRT  
 <213> Homo sapiens

<400> 180  
 Met Pro Lys Thr Met His Phe Leu Phe Arg Phe Ile Val Phe Phe  
 1 5 10 15  
 Tyr Leu Trp Gly Leu Phe Thr Ala Gln Arg Gln Lys Lys Glu Glu  
 20 25 30  
 Ser Thr Glu Glu Val Lys Ile Glu Val Leu His Arg Pro Glu Asn  
 35 40 45  
 Cys Ser Lys Thr Ser Lys Lys Gly Asp Leu Leu Asn Ala His Tyr  
 50 55 60  
 Asp Gly Tyr Leu Ala Lys Asp Gly Ser Lys Phe Tyr Cys Ser Arg  
 65 70 75  
 Thr Gln Asn Glu Gly His Pro Lys Trp Phe Val Leu Gly Val Gly  
 80 85 90  
 Gln Val Ile Lys Gly Leu Asp Ile Ala Met Thr Asp Met Cys Pro  
 95 100 105  
 Gly Glu Lys Arg Lys Val Val Ile Pro Pro Ser Phe Ala Tyr Gly  
 110 115 120  
 Lys Glu Gly Tyr Ala Glu Gly Lys Ile Pro Pro Asp Ala Thr Leu  
 125 130 135  
 Ile Phe Glu Ile Glu Leu Tyr Ala Val Thr Lys Gly Pro Arg Ser  
 140 145 150

Ile Glu Thr Phe Lys Gln Ile Asp Met Asp Asn Asp Arg Gln Leu  
155 160 165  
Ser Lys Ala Glu Ile Asn Leu Tyr Leu Gln Arg Glu Phe Glu Lys  
170 175 180  
Asp Glu Lys Pro Arg Asp Lys Ser Tyr Gln Asp Ala Val Leu Glu  
185 190 195  
Asp Ile Phe Lys Lys Asn Asp His Asp Gly Asp Gly Phe Ile Ser  
200 205 210  
Pro Lys Glu Tyr Asn Val Tyr Gln His Asp Glu Leu  
215 220

<210> 181  
<211> 22  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-22  
<223> Synthetic construct.

<400> 181  
gtgtttctgct ggagccgatg cc 22

<210> 182  
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<220>  
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<222> 1-18  
<223> Synthetic construct.

<400> 182  
gacatggaca atgacagg 18

<210> 183  
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<212> DNA  
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<220>  
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<222> 1-18  
<223> Synthetic construct.

<400> 183  
cctttcagga tgtaggag 18

<210> 184  
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<220>  
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 <223> Synthetic construct.

<400> 184  
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<210> 185  
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 <223> Synthetic construct.

<400> 185  
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<210> 186  
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 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 186  
 tacaagaggg aagaggagtt gcac 24

<210> 187  
 <211> 52  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-52  
 <223> Synthetic construct.

<400> 187  
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 cc 52

<210> 188  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<400> 188  
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cccaaatgct tctgtgtca ataacaactca ctgcacctgc aaccatggat 150  
 atactttctgg atctgggcag aaactattca cattcccctt ggagacatgt 200  
 aacgccaggc atggtggctc ggcctgttaa tcccagttct ttgggaagcc 250  
 aaggcaggtg gatcacctga ggtcaggagt ttgagaccag cctggccaac 300  
 atagtgaaac cccgtgtcta ctaaaaatac aaaaatcagc cgggcgtggt 350  
 ggtgcatgcc tgcaatccca gttactcggg aggctgaggc aggagaatcg 400  
 cttgaactca ggaggcagaa gttgcagtga acccagatcc tgccattgca 450  
 ctccagcatg gatgacagag caagactccg tctcaaaaag aaaagatagt 500  
 ttcttgtttc atttcgcgac tgccctctca gtgtttcctg ggatcccctc 550  
 ccaaataaag tacttatatt ctc 573

<210> 189  
 <211> 74  
 <212> PRT  
 <213> Homo sapiens

<400> 189  
 Met Gln Gly Pro Leu Leu Leu Pro Gly Leu Cys Phe Leu Leu Ser  
 1 5 10 15  
 Leu Phe Gly Ala Val Thr Gln Lys Thr Lys Thr Ser Cys Ala Lys  
 20 25 30  
 Cys Pro Pro Asn Ala Ser Cys Val Asn Asn Thr His Cys Thr Cys  
 35 40 45  
 Asn His Gly Tyr Thr Ser Gly Ser Gly Gln Lys Leu Phe Thr Phe  
 50 55 60  
 Pro Leu Glu Thr Cys Asn Ala Arg His Gly Gly Ser Arg Leu  
 65 70

<210> 190  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 190  
 agggaccatt gcttcttcca ggcc 24

<210> 191  
 <211> 24  
 <212> DNA  
 <213> Artificial



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<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.

<400> 191
cgttacatgt ctccaagggg aatg 24

<210> 192
<211> 50
<212> DNA
<213> Artificial

<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.

<400> 192
cctgtgctaa gtgccccca aatgcttcct gtgtcaataa cactcactgc 50

<210> 193
<211> 1091
<212> DNA
<213> Homo sapiens

<400> 193
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gactttggaa gtgaccacc atgggggtca gcatcttttt gctcctgtgt 150
gttcttgggc tcagccaggc agccacaccg aagattttca atggcactga 200
gtgtgggcgt aactcacagc cgtggcaggt ggggctgttt gagggcacca 250
gcctgcgctg cgggggtgtc cttattgacc acaggtgggt cctcacagcg 300
gctcactgca gcggcagcag gtactgggtg cgctggggg aacacagcct 350
cagccagctc gactggaccg agcagatccg gcacagcggc ttctctgtga 400
cccatcccgg ctacctggga gcctcgacga gccacgagca cgacctccgg 450
ctgctgcggc tgcgcctgcc cgtccgcgta accagcagcg ttcaaccct 500
gcccctgccc aatgactgtg caaccgctgg caccgagtgc cactctcag 550
gctggggcat caccaaccac ccacggaacc cattcccga tctgtctcag 600
tgcctcaacc tctccatcgt ctcccatgcc acctgccatg gtgtgtatcc 650
cgggagaatc acgagcaaca tgggtgtgtg agggggcgtc ccggggcagg 700
atgcctgcca gggtgattct gggggccccc tgggtgtgtg gggagtcctt 750
caaggtctgg tgcctgggg gtctgtgggg ccctgtggac aagatggcat 800

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ccctggagtc tacacctata ttgcaagta tgtggactgg atccggatga 850
tcatgaggaa caactgacct gtttcctcca cctccacccc caccoccttaa 900
cttgggtacc cctctggccc tcagagcacc aatatctcct ccatcacttc 950
ccctagctcc actcttggtg gcctgggaac ttcttggaac tttaactcct 1000
gccagccctt ctaagacca cgagcggggt gagagaagtg tgcaatagtc 1050
tggaataaat ataaatgaag gaggggcaaa aaaaaaaaaa a 1091
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<213> Homo sapiens

Met Gly Leu Ser Ile Phe Leu Leu Leu Cys Val Leu Gly Leu Ser  
1 5 10 15

Gln Ala Ala Thr Pro Lys Ile Phe Asn Gly Thr Glu Cys Gly Arg  
20 25 30

Asn Ser Gln Pro Trp Gln Val Gly Leu Phe Glu Gly Thr Ser Leu  
35 40 45

Arg Cys Gly Gly Val Leu Ile Asp His Arg Trp Val Leu Thr Ala  
50 55 60

Ala His Cys Ser Gly Ser Arg Tyr Trp Val Arg Leu Gly Glu His  
65 70 75

Ser Leu Ser Gln Leu Asp Trp Thr Glu Gln Ile Arg His Ser Gly  
80 85 90

Phe Ser Val Thr His Pro Gly Tyr Leu Gly Ala Ser Thr Ser His  
95 100 105

Glu His Asp Leu Arg Leu Leu Arg Leu Arg Leu Pro Val Arg Val  
110 115 120

Thr Ser Ser Val Gln Pro Leu Pro Leu Pro Asn Asp Cys Ala Thr  
125 130 135

Ala Gly Thr Glu Cys His Val Ser Gly Trp Gly Ile Thr Asn His  
140 145 150

Pro Arg Asn Pro Phe Pro Asp Leu Leu Gln Cys Leu Asn Leu Ser  
155 160 165

Ile Val Ser His Ala Thr Cys His Gly Val Tyr Pro Gly Arg Ile  
170 175 180

Thr Ser Asn Met Val Cys Ala Gly Gly Val Pro Gly Gln Asp Ala  
185 190 195

Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Gly Gly Val Leu

				200						205					210
Gln	Gly	Leu	Val	Ser 215	Trp	Gly	Ser	Val	Gly 220	Pro	Cys	Gly	Gln	Asp 225	
Gly	Ile	Pro	Gly	Val 230	Tyr	Thr	Tyr	Ile	Cys 235	Lys	Tyr	Val	Asp	Trp 240	
Ile	Arg	Met	Ile	Met 245	Arg	Asn	Asn								

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<210> 195
<211> 1485
<212> DNA
<213> Homo sapiens
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tcgccatgtc gggcgagctc agcaacaggt tccaaggagg gaaggcgttc 150
ggcttgctca aagcccggca ggagaggagg ctggccgaga tcaaccggga 200
gtttctgtgt gaccagaagt acagtgatga agagaacctt ccagaaaagc 250
tcacagcctt caaagagaag tacatggagt ttgacctgaa caatgaaggc 300
gagattgacc tgatgtcttt aaagaggatg atggagaagc ttggtgtccc 350
caagaccac ctggagatga agaagatgat ctcagaggtg acaggagggg 400
tcagtgcac tatatcctac cgagactttg tgaacatgat gctggggaaa 450
cggtcggctg tcctcaagtt agtcatgatg tttgaaggaa aagccaacga 500
gagcagcccc aagccagttg gccccctcc agagagagac attgctagcc 550
tgccctgagg accccgcctg gactccccag ccttcccacc ccatacctcc 600
ctcccgatct tgctgccctt cttgacacac tgtgatctct ctctctctca 650
tttgtttggt cattgagggg ttgtttgtgt tttcatcaat gtctttgtaa 700
agcacaaatt atctgcctta aaggggctct gggtcgggga atcctgagcc 750
ttgggtcccc tcctctctt cttccctcct tccccgctcc ctgtgcagaa 800
gggctgatat caaaccaaaa actagagggg gcagggccag ggcagggagg 850
cttcagcct gtgttcccct cacttgaggg aaccagcact ctccatcctt 900
tcagaaagtc tccaagccaa gttcaggctc actgacctgg ctctgacgag 950
gacccaggc cactctgaga agaccttga gtagggacaa ggctgcaggg 1000
cctctttcgg gtttccttgg acagtgccat ggttccagtg ctctgggtgtc 1050
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acccaggaca cagccactcg gggccccgct gccccagctg atccccactc 1100  
 attccacacc tcttctcatc ctcagtgatg tgaaggtggg aaggaaagga 1150  
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 ctgctctctg gccacacctg tgcaggcagc tgagaggcag cgtgcagccc 1250  
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 tggggtttgg ggggaaaggt cagctcagtg ctgttccacc ttttagggag 1350  
 gatactgagg ggaccaggat gggagaatga ggagtaaaat gctcacggca 1400  
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 tgaccccaat ctgcttgaaa aaaaaaaaaa aaaaa 1485

<210> 196  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 196  
 Met Ser Gly Glu Leu Ser Asn Arg Phe Gln Gly Gly Lys Ala Phe  
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 Gly Leu Leu Lys Ala Arg Gln Glu Arg Arg Leu Ala Glu Ile Asn  
 20 25 30  
 Arg Glu Phe Leu Cys Asp Gln Lys Tyr Ser Asp Glu Glu Asn Leu  
 35 40 45  
 Pro Glu Lys Leu Thr Ala Phe Lys Glu Lys Tyr Met Glu Phe Asp  
 50 55 60  
 Leu Asn Asn Glu Gly Glu Ile Asp Leu Met Ser Leu Lys Arg Met  
 65 70 75  
 Met Glu Lys Leu Gly Val Pro Lys Thr His Leu Glu Met Lys Lys  
 80 85 90  
 Met Ile Ser Glu Val Thr Gly Gly Val Ser Asp Thr Ile Ser Tyr  
 95 100 105  
 Arg Asp Phe Val Asn Met Met Leu Gly Lys Arg Ser Ala Val Leu  
 110 115 120  
 Lys Leu Val Met Met Phe Glu Gly Lys Ala Asn Glu Ser Ser Pro  
 125 130 135  
 Lys Pro Val Gly Pro Pro Pro Glu Arg Asp Ile Ala Ser Leu Pro  
 140 145 150

<210> 197  
 <211> 4842  
 <212> DNA  
 <213> Homo sapiens

<400> 197.

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ggggtcggcg ccgccgtgcg cgcccgctg gcgctggcct tggcgctggc 150  
gagcgtcctg agtgggcctc cagccgtcgc ctgccccacc aagtgtacct 200  
gctccgctgc cagcgtggac tgccacgggc tgggcctccg cgcggttctt 250  
cggggcatcc cccgcaacgc tgagcgcctt gacctggaca gaaataatat 300  
caccaggatc accaagatgg acttcgctgg gctcaagaac ctccgagtct 350  
tgcatctgga agacaaccag gtcagcgtca tcgagagagg cgccttccag 400  
gacctgaagc agctagagcg actgcgcctg aacaagaata agctgcaagt 450  
ccttccagaa ttgcttttcc agagcacgcc gaagctcacc agactagatt 500  
tgagtgaaaa ccagatccag gggatcccg ggaaggcggt ccgcggcatc 550  
accgatgtga agaacctgca actggacaac aaccacatca gctgcattga 600  
agatggagcc ttccgagcgc tgcgcgattt ggagatcctt accctcaaca 650  
acaacaacat cagtgcacgc ctggtcacca gcttcaacca catgccgaag 700  
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cagaagaagg agtacgtgtg cccagcccc cactcggagc ccccatcctg 900  
caatgccaac tccatctcct gcccttcgcc ctgcacgtgc agcaataaca 950  
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cggccacaga tgccaccatg gaaaatgtgt ggcaactggg acctcataca 4250  
tgtgcaagtg tgccgagggc tatggagggg acttgtgtga caacaagaat 4300  
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cccgcagcaa gcggcgga aa tacgtottcc agtgcacgga cggctcctcg 4600  
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gttgggacag ccatgtggga cccctggtg attcagcatg aaggaaatga 4750  
agctggagag gaaggtaaag aagaagagaa tattaagtat attgtaaaat 4800  
aaacaaaaaa tagaacttaa aaaaaaaaaa aaaaaaaaaa aa 4842

<210> 198  
<211> 1523  
<212> PRT  
<213> Homo sapiens

<400> 198  
Met Ala Pro Gly Trp Ala Gly Val Gly Ala Ala Val Arg Ala Arg  
1 5 10 15  
Leu Ala Leu Ala Leu Ala Leu Ala Ser Val Leu Ser Gly Pro Pro  
20 25 30  
Ala Val Ala Cys Pro Thr Lys Cys Thr Cys Ser Ala Ala Ser Val  
35 40 45  
Asp Cys His Gly Leu Gly Leu Arg Ala Val Pro Arg Gly Ile Pro  
50 55 60  
Arg Asn Ala Glu Arg Leu Asp Leu Asp Arg Asn Asn Ile Thr Arg  
65 70 75  
Ile Thr Lys Met Asp Phe Ala Gly Leu Lys Asn Leu Arg Val Leu  
80 85 90  
His Leu Glu Asp Asn Gln Val Ser Val Ile Glu Arg Gly Ala Phe  
95 100 105  
Gln Asp Leu Lys Gln Leu Glu Arg Leu Arg Leu Asn Lys Asn Lys  
110 115 120  
Leu Gln Val Leu Pro Glu Leu Leu Phe Gln Ser Thr Pro Lys Leu  
125 130 135  
Thr Arg Leu Asp Leu Ser Glu Asn Gln Ile Gln Gly Ile Pro Arg  
140 145 150  
Lys Ala Phe Arg Gly Ile Thr Asp Val Lys Asn Leu Gln Leu Asp  
155 160 165



Asn Asn His Ile Ser Cys Ile Glu Asp Gly Ala Phe Arg Ala Leu  
170 175 180

Arg Asp Leu Glu Ile Leu Thr Leu Asn Asn Asn Asn Ile Ser Arg  
185 190 195

Ile Leu Val Thr Ser Phe Asn His Met Pro Lys Ile Arg Thr Leu  
200 205 210

Arg Leu His Ser Asn His Leu Tyr Cys Asp Cys His Leu Ala Trp  
215 220 225

Leu Ser Asp Trp Leu Arg Gln Arg Arg Thr Val Gly Gln Phe Thr  
230 235 240

Leu Cys Met Ala Pro Val His Leu Arg Gly Phe Asn Val Ala Asp  
245 250 255

Val Gln Lys Lys Glu Tyr Val Cys Pro Ala Pro His Ser Glu Pro  
260 265 270

Pro Ser Cys Asn Ala Asn Ser Ile Ser Cys Pro Ser Pro Cys Thr  
275 280 285

Cys Ser Asn Asn Ile Val Asp Cys Arg Gly Lys Gly Leu Met Glu  
290 295 300

Ile Pro Ala Asn Leu Pro Glu Gly Ile Val Glu Ile Arg Leu Glu  
305 310 315

Gln Asn Ser Ile Lys Ala Ile Pro Ala Gly Ala Phe Thr Gln Tyr  
320 325 330

Lys Lys Leu Lys Arg Ile Asp Ile Ser Lys Asn Gln Ile Ser Asp  
335 340 345

Ile Ala Pro Asp Ala Phe Gln Gly Leu Lys Ser Leu Thr Ser Leu  
350 355 360

Val Leu Tyr Gly Asn Lys Ile Thr Glu Ile Ala Lys Gly Leu Phe  
365 370 375

Asp Gly Leu Val Ser Leu Gln Leu Leu Leu Leu Asn Ala Asn Lys  
380 385 390

Ile Asn Cys Leu Arg Val Asn Thr Phe Gln Asp Leu Gln Asn Leu  
395 400 405

Asn Leu Leu Ser Leu Tyr Asp Asn Lys Leu Gln Thr Ile Ser Lys  
410 415 420

Gly Leu Phe Ala Pro Leu Gln Ser Ile Gln Thr Leu His Leu Ala  
425 430 435

Gln Asn Pro Phe Val Cys Asp Cys His Leu Lys Trp Leu Ala Asp  
440 445 450

Tyr Leu Gln Asp Asn Pro Ile Glu Thr Ser Gly Ala Arg Cys Ser

455	460	465
Ser Pro Arg Arg Leu Ala Asn Lys Arg	Ile Ser Gln Ile Lys Ser	
470	475	480
Lys Lys Phe Arg Cys Ser Gly Ser Glu	Asp Tyr Arg Ser Arg Phe	
485	490	495
Ser Ser Glu Cys Phe Met Asp Leu Val	Cys Pro Glu Lys Cys Arg	
500	505	510
Cys Glu Gly Thr Ile Val Asp Cys Ser	Asn Gln Lys Leu Val Arg	
515	520	525
Ile Pro Ser His Leu Pro Glu Tyr Val	Thr Asp Leu Arg Leu Asn	
530	535	540
Asp Asn Glu Val Ser Val Leu Glu Ala	Thr Gly Ile Phe Lys Lys	
545	550	555
Leu Pro Asn Leu Arg Lys Ile Asn Leu	Ser Asn Asn Lys Ile Lys	
560	565	570
Glu Val Arg Glu Gly Ala Phe Asp Gly	Ala Ala Ser Val Gln Glu	
575	580	585
Leu Met Leu Thr Gly Asn Gln Leu Glu	Thr Val His Gly Arg Val	
590	595	600
Phe Arg Gly Leu Ser Gly Leu Lys Thr	Leu Met Leu Arg Ser Asn	
605	610	615
Leu Ile Ser Cys Val Ser Asn Asp Thr	Phe Ala Gly Leu Ser Ser	
620	625	630
Val Arg Leu Leu Ser Leu Tyr Asp Asn	Arg Ile Thr Thr Ile Thr	
635	640	645
Pro Gly Ala Phe Thr Thr Leu Val Ser	Leu Ser Thr Ile Asn Leu	
650	655	660
Leu Ser Asn Pro Phe Asn Cys Asn Cys	His Leu Ala Trp Leu Gly	
665	670	675
Lys Trp Leu Arg Lys Arg Arg Ile Val	Ser Gly Asn Pro Arg Cys	
680	685	690
Gln Lys Pro Phe Phe Leu Lys Glu Ile	Pro Ile Gln Asp Val Ala	
695	700	705
Ile Gln Asp Phe Thr Cys Asp Gly Asn	Glu Glu Ser Ser Cys Gln	
710	715	720
Leu Ser Pro Arg Cys Pro Glu Gln Cys	Thr Cys Met Glu Thr Val	
725	730	735
Val Arg Cys Ser Asn Lys Gly Leu Arg	Ala Leu Pro Arg Gly Met	
740	745	750

Pro	Lys	Asp	Val	Thr 755	Glu	Leu	Tyr	Leu	Glu 760	Gly	Asn	His	Leu	Thr 765
Ala	Val	Pro	Arg	Glu 770	Leu	Ser	Ala	Leu	Arg 775	His	Leu	Thr	Leu	Ile 780
Asp	Leu	Ser	Asn	Asn 785	Ser	Ile	Ser	Met	Leu 790	Thr	Asn	Tyr	Thr	Phe 795
Ser	Asn	Met	Ser	His 800	Leu	Ser	Thr	Leu	Ile 805	Leu	Ser	Tyr	Asn	Arg 810
Leu	Arg	Cys	Ile	Pro 815	Val	His	Ala	Phe	Asn 820	Gly	Leu	Arg	Ser	Leu 825
Arg	Val	Leu	Thr	Leu 830	His	Gly	Asn	Asp	Ile 835	Ser	Ser	Val	Pro	Glu 840
Gly	Ser	Phe	Asn	Asp 845	Leu	Thr	Ser	Leu	Ser 850	His	Leu	Ala	Leu	Gly 855
Thr	Asn	Pro	Leu	His 860	Cys	Asp	Cys	Ser	Leu 865	Arg	Trp	Leu	Ser	Glu 870
Trp	Val	Lys	Ala	Gly 875	Tyr	Lys	Glu	Pro	Gly 880	Ile	Ala	Arg	Cys	Ser 885
Ser	Pro	Glu	Pro	Met 890	Ala	Asp	Arg	Leu	Leu 895	Leu	Thr	Thr	Pro	Thr 900
His	Arg	Phe	Gln	Cys 905	Lys	Gly	Pro	Val	Asp 910	Ile	Asn	Ile	Val	Ala 915
Lys	Cys	Asn	Ala	Cys 920	Leu	Ser	Ser	Pro	Cys 925	Lys	Asn	Asn	Gly	Thr 930
Cys	Thr	Gln	Asp	Pro 935	Val	Glu	Leu	Tyr	Arg 940	Cys	Ala	Cys	Pro	Tyr 945
Ser	Tyr	Lys	Gly	Lys 950	Asp	Cys	Thr	Val	Pro 955	Ile	Asn	Thr	Cys	Ile 960
Gln	Asn	Pro	Cys	Gln 965	His	Gly	Gly	Thr	Cys 970	His	Leu	Ser	Asp	Ser 975
His	Lys	Asp	Gly	Phe 980	Ser	Cys	Ser	Cys	Pro 985	Leu	Gly	Phe	Glu	Gly 990
Gln	Arg	Cys	Glu	Ile 995	Asn	Pro	Asp	Asp	Cys 1000	Glu	Asp	Asn	Asp	Cys 1005
Glu	Asn	Asn	Ala	Thr 1010	Cys	Val	Asp	Gly	Ile 1015	Asn	Asn	Tyr	Val	Cys 1020
Ile	Cys	Pro	Pro	Asn 1025	Tyr	Thr	Gly	Glu	Leu 1030	Cys	Asp	Glu	Val	Ile 1035
Asp	His	Cys	Val	Pro	Glu	Leu	Asn	Leu	Cys	Gln	His	Glu	Ala	Lys

1040	1045	1050
Cys Ile Pro Leu Asp	Lys Gly Phe Ser Cys Glu Cys Val Pro Gly	
1055	1060	1065
Tyr Ser Gly Lys Leu Cys Glu Thr Asp Asn Asp Asp Cys Val Ala		
1070	1075	1080
His Lys Cys Arg His Gly Ala Gln Cys Val Asp Thr Ile Asn Gly		
1085	1090	1095
Tyr Thr Cys Thr Cys Pro Gln Gly Phe Ser Gly Pro Phe Cys Glu		
1100	1105	1110
His Pro Pro Pro Met Val Leu Leu Gln Thr Ser Pro Cys Asp Gln		
1115	1120	1125
Tyr Glu Cys Gln Asn Gly Ala Gln Cys Ile Val Val Gln Gln Glu		
1130	1135	1140
Pro Thr Cys Arg Cys Pro Pro Gly Phe Ala Gly Pro Arg Cys Glu		
1145	1150	1155
Lys Leu Ile Thr Val Asn Phe Val Gly Lys Asp Ser Tyr Val Glu		
1160	1165	1170
Leu Ala Ser Ala Lys Val Arg Pro Gln Ala Asn Ile Ser Leu Gln		
1175	1180	1185
Val Ala Thr Asp Lys Asp Asn Gly Ile Leu Leu Tyr Lys Gly Asp		
1190	1195	1200
Asn Asp Pro Leu Ala Leu Glu Leu Tyr Gln Gly His Val Arg Leu		
1205	1210	1215
Val Tyr Asp Ser Leu Ser Ser Pro Pro Thr Thr Val Tyr Ser Val		
1220	1225	1230
Glu Thr Val Asn Asp Gly Gln Phe His Ser Val Glu Leu Val Thr		
1235	1240	1245
Leu Asn Gln Thr Leu Asn Leu Val Val Asp Lys Gly Thr Pro Lys		
1250	1255	1260
Ser Leu Gly Lys Leu Gln Lys Gln Pro Ala Val Gly Ile Asn Ser		
1265	1270	1275
Pro Leu Tyr Leu Gly Gly Ile Pro Thr Ser Thr Gly Leu Ser Ala		
1280	1285	1290
Leu Arg Gln Gly Thr Asp Arg Pro Leu Gly Gly Phe His Gly Cys		
1295	1300	1305
Ile His Glu Val Arg Ile Asn Asn Glu Leu Gln Asp Phe Lys Ala		
1310	1315	1320
Leu Pro Pro Gln Ser Leu Gly Val Ser Pro Gly Cys Lys Ser Cys		
1325	1330	1335

Thr	Val	Cys	Lys	His 1340	Gly	Leu	Cys	Arg	Ser 1345	Val	Glu	Lys	Asp	Ser 1350
Val	Val	Cys	Glu	Cys 1355	Arg	Pro	Gly	Trp	Thr 1360	Gly	Pro	Leu	Cys	Asp 1365
Gln	Glu	Ala	Arg	Asp 1370	Pro	Cys	Leu	Gly	His 1375	Arg	Cys	His	His	Gly 1380
Lys	Cys	Val	Ala	Thr 1385	Gly	Thr	Ser	Tyr	Met 1390	Cys	Lys	Cys	Ala	Glu 1395
Gly	Tyr	Gly	Gly	Asp 1400	Leu	Cys	Asp	Asn	Lys 1405	Asn	Asp	Ser	Ala	Asn 1410
Ala	Cys	Ser	Ala	Phe 1415	Lys	Cys	His	His	Gly 1420	Gln	Cys	His	Ile	Ser 1425
Asp	Gln	Gly	Glu	Pro 1430	Tyr	Cys	Leu	Cys	Gln 1435	Pro	Gly	Phe	Ser	Gly 1440
Glu	His	Cys	Gln	Gln 1445	Glu	Asn	Pro	Cys	Leu 1450	Gly	Gln	Val	Val	Arg 1455
Glu	Val	Ile	Arg	Arg 1460	Gln	Lys	Gly	Tyr	Ala 1465	Ser	Cys	Ala	Thr	Ala 1470
Ser	Lys	Val	Pro	Ile 1475	Met	Glu	Cys	Arg	Gly 1480	Gly	Cys	Gly	Pro	Gln 1485
Cys	Cys	Gln	Pro	Thr 1490	Arg	Ser	Lys	Arg	Arg 1495	Lys	Tyr	Val	Phe	Gln 1500
Cys	Thr	Asp	Gly	Ser 1505	Ser	Phe	Val	Glu	Glu 1510	Val	Glu	Arg	His	Leu 1515
Glu	Cys	Gly	Cys	Leu 1520	Ala	Cys	Ser							

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<210> 199
<211> 24
<212> DNA
<213> Artificial
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```
<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.
```

```
<400> 199
atggagattc ctgccaaactt gccg 24
```

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<210> 200
<211> 24
<212> DNA
<213> Artificial
```

<220>









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gaggaataca ccacaggcat ggcagactgc atcttagtca acagccagtt 350  
cacagctgct gtttttaagg aaacattcaa gtccctgtct cacatagacc 400  
ctgatgtcct ctatccatct ctaaatgtca ccagctttga ctcagttggt 450  
cctgaaaagc tggatgacct agtccccaag gggaaaaaat tcctgctgct 500  
ctccatcaac agatacgaaa ggaagaaaaa tctgactttg gcactggaag 550  
ccctagtaca gctgctgga agattgacat cccaagattg ggagaggggt 600  
catctgatcg tggcaggtgg ttatgacgag agagtccctg agaatgtgga 650  
acattatcag gaattgaaga aaatgggtcca acagtccgac cttggccagt 700  
atgtgacctt cttgaggtct ttctcagaca aacagaaaat ctccctcctc 750  
cacagctgca cgtgtgtgct ttacacacca agcaatgagc actttggcat 800  
tgtccctctg gaagccatgt acatgcagtg cccagtcatt gctgttaatt 850  
cgggtggacc cttggagtcc attgaccaca gtgtcacagg gtttctgtgt 900  
gagcctgacc cgggtgcactt ctcagaagca atagaaaagt tcatccgtga 950  
accttcctta aaagccacca tgggcctggc tgggaagagcc agagtgaagg 1000  
aaaaattttc ccctgaagca ttacagaac agctctaccg atatgttacc 1050  
aaactgctgg tataatcaga ttgtttttaa gatctccatt aatgtcattt 1100  
ttatggattg tagaccaggt tttgaaacca aaaaagaaac ctagaatcta 1150  
atgcagaaga gatcttttaa aaaataaact tgagtcttga atgtgagcca 1200  
ctttcctata taccacacct ccctgtccac ttttcagaaa aaccatgtct 1250  
tttatgctat aatcattcca aattttgcca gtgttaagtt acaaatgtgg 1300  
tgtcattcca tgttcagcag agtattttta ttatattttc tcgggattat 1350  
tgctcttctg totataaatt ttgaatgata ctgtgcctta attggttttc 1400  
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ataatgagag cagggtctatt gtagttccca gattcaatcc accgaagtgt 1500  
tcaactgtcat ctgttaggga atttttggtt gtcctgtctt tgcctggatc 1550  
catagcgaga gtgctctgta ttttttttaa gataatttgt atttttgcac 1600  
actgagatat aataaaagggt gtttatcata aaaaaaaaaa aaaaaaaaaa 1648

<210> 210  
<211> 323

<212> PRT

<213> Homo sapiens

<400> 210

Met	Pro	Leu	Leu	Lys	Leu	Val	His	Gly	Ser	Pro	Leu	Val	Phe	Gly	1	5	10	15
Glu	Lys	Phe	Lys	Leu	Phe	Thr	Leu	Val	Ser	Ala	Cys	Ile	Pro	Val	20	25	30	
Phe	Arg	Leu	Ala	Arg	Arg	Arg	Lys	Lys	Ile	Leu	Phe	Tyr	Cys	His	35	40	45	
Phe	Pro	Asp	Leu	Leu	Leu	Thr	Lys	Arg	Asp	Ser	Phe	Leu	Lys	Arg	50	55	60	
Leu	Tyr	Arg	Ala	Pro	Ile	Asp	Trp	Ile	Glu	Glu	Tyr	Thr	Thr	Gly	65	70	75	
Met	Ala	Asp	Cys	Ile	Leu	Val	Asn	Ser	Gln	Phe	Thr	Ala	Ala	Val	80	85	90	
Phe	Lys	Glu	Thr	Phe	Lys	Ser	Leu	Ser	His	Ile	Asp	Pro	Asp	Val	95	100	105	
Leu	Tyr	Pro	Ser	Leu	Asn	Val	Thr	Ser	Phe	Asp	Ser	Val	Val	Pro	110	115	120	
Glu	Lys	Leu	Asp	Asp	Leu	Val	Pro	Lys	Gly	Lys	Lys	Phe	Leu	Leu	125	130	135	
Leu	Ser	Ile	Asn	Arg	Tyr	Glu	Arg	Lys	Lys	Asn	Leu	Thr	Leu	Ala	140	145	150	
Leu	Glu	Ala	Leu	Val	Gln	Leu	Arg	Gly	Arg	Leu	Thr	Ser	Gln	Asp	155	160	165	
Trp	Glu	Arg	Val	His	Leu	Ile	Val	Ala	Gly	Gly	Tyr	Asp	Glu	Arg	170	175	180	
Val	Leu	Glu	Asn	Val	Glu	His	Tyr	Gln	Glu	Leu	Lys	Lys	Met	Val	185	190	195	
Gln	Gln	Ser	Asp	Leu	Gly	Gln	Tyr	Val	Thr	Phe	Leu	Arg	Ser	Phe	200	205	210	
Ser	Asp	Lys	Gln	Lys	Ile	Ser	Leu	Leu	His	Ser	Cys	Thr	Cys	Val	215	220	225	
Leu	Tyr	Thr	Pro	Ser	Asn	Glu	His	Phe	Gly	Ile	Val	Pro	Leu	Glu	230	235	240	
Ala	Met	Tyr	Met	Gln	Cys	Pro	Val	Ile	Ala	Val	Asn	Ser	Gly	Gly	245	250	255	
Pro	Leu	Glu	Ser	Ile	Asp	His	Ser	Val	Thr	Gly	Phe	Leu	Cys	Glu	260	265	270	

Pro Asp Pro Val His Phe Ser Glu Ala Ile Glu Lys Phe Ile Arg  
275 280 285  
Glu Pro Ser Leu Lys Ala Thr Met Gly Leu Ala Gly Arg Ala Arg  
290 295 300  
Val Lys Glu Lys Phe Ser Pro Glu Ala Phe Thr Glu Gln Leu Tyr  
305 310 315  
Arg Tyr Val Thr Lys Leu Leu Val  
320

<210> 211  
<211> 1554  
<212> DNA  
<213> Homo sapiens

<400> 211  
gactacgccg atccgagacg tggctccctg ggcggcagaa ccatgttgga 50  
cttcgcgata ttgcgcgtta ccttcttgct ggcgttggtg ggagccgtgc 100  
tctacctcta tccggcttcc agacaagctg caggaattcc agggattact 150  
ccaactgaag aaaaagatgg taatcttcca gatattgtga atagtggaag 200  
tttgcattgag ttctctggtta atttgcattga gagatatggg cctgtggtct 250  
ccttctggtt tggcaggcgc ctctgtggtta gtttgggcac tgttgatgta 300  
ctgaagcagc atatcaatcc caataagaca tcggaccctt ttgaaacctat 350  
gctgaagtca ttattaaggt atcaatctgg tgggtggcagt gtgagtgaag 400  
accacatgag gaaaaaattg tatgaaaatg gtgtgactga ttctctgaag 450  
agtaactttg cctctctctt aaagctttca gaagaattat tagataaatg 500  
gctctcctac ccagagaccc agcacgtgcc cctcagccag catatgcttg 550  
gttttgctat gaagtctggt acacagatgg taatgggtag tacatttgaa 600  
gatgatcagg aagtcattcg ctccagaag aatcatggca cagtttggtc 650  
tgagattgga aaaggctttc tagatgggtc acttgataaa aacatgactc 700  
ggaaaaaaca atatgaagat gccctcatgc aactggagtc tgttttaagg 750  
aacatcataa aagaacgaaa aggaaggaac ttcagtcaac atattttcat 800  
tgactcctta gtacaaggga accttaatga ccaacagatc ctagaagaca 850  
gtatgatatt ttctctggcc agttgcataa taactgcaaa attgtgtacc 900  
tgaggcaatct gttttttaac cacctctgaa gaagttcaaa aaaaattata 950  
tgaagagata aaccaagttt ttggaaatgg tcctgttact ccagagaaaa 1000

ttgagcagct	cagatattgt	cagcatgtgc	tttgtgaaac	tgttcgaact	1050
gccaaactga	ctccagtttc	tgcccagctt	caagatattg	aaggaaaaat	1100
tgaccgattt	attattccta	gagagaccct	cgtcctttat	gcccttggtg	1150
tggtacttca	ggatccta	acttggccat	ctccacacaa	gtttgatcca	1200
gatcggtttg	atgatgaatt	agtaatgaaa	actttttcct	cacttggatt	1250
ctcaggcaca	caggagtgtc	cagagttgag	gtttgcatat	atgggtgacca	1300
cagtacttct	tagtgtattg	gtgaagagac	tgcacctact	ttctgtggag	1350
ggacagggtta	ttgaaacaaa	gtatgaactg	gtaacatcat	caagggaaga	1400
agcttggatc	actgtctcaa	agagatat	aaattttata	catttaaaat	1450
cattgttaaa	ttgattgagg	aaaacaacca	tttaaaaaaa	atctatgttg	1500
aatcctttta	taaaccagta	tcactttgta	atataaacac	ctatttgtac	1550
ttaa	1554				

```
<210> 212
<211> 462
<212> PRT
<213> Homo sapiens
```

```

<400> 212
Met Leu Asp Phe Ala Ile Phe Ala Val Thr Phe Leu Leu Ala Leu
  1          5          10          15
Val Gly Ala Val Leu Tyr Leu Tyr Pro Ala Ser Arg Gln Ala Ala
          20          25          30
Gly Ile Pro Gly Ile Thr Pro Thr Glu Glu Lys Asp Gly Asn Leu
          35          40          45
Pro Asp Ile Val Asn Ser Gly Ser Leu His Glu Phe Leu Val Asn
          50          55          60
Leu His Glu Arg Tyr Gly Pro Val Val Ser Phe Trp Phe Gly Arg
          65          70          75
Arg Leu Val Val Ser Leu Gly Thr Val Asp Val Leu Lys Gln His
          80          85          90
Ile Asn Pro Asn Lys Thr Ser Asp Pro Phe Glu Thr Met Leu Lys
          95          100          105
Ser Leu Leu Arg Tyr Gln Ser Gly Gly Gly Ser Val Ser Glu Asn
          110          115          120
His Met Arg Lys Lys Leu Tyr Glu Asn Gly Val Thr Asp Ser Leu
          125          130          135
Lys Ser Asn Phe Ala Leu Leu Leu Lys Leu Ser Glu Glu Leu Leu

```

Asp Lys Trp Leu Ser Tyr Pro Glu Thr	Gln His Val Pro Leu Ser
155	160 165
Gln His Met Leu Gly Phe Ala Met Lys	Ser Val Thr Gln Met Val
170	175 180
Met Gly Ser Thr Phe Glu Asp Asp Gln	Glu Val Ile Arg Phe Gln
185	190 195
Lys Asn His Gly Thr Val Trp Ser Glu	Ile Gly Lys Gly Phe Leu
200	205 210
Asp Gly Ser Leu Asp Lys Asn Met Thr	Arg Lys Lys Gln Tyr Glu
215	220 225
Asp Ala Leu Met Gln Leu Glu Ser Val	Leu Arg Asn Ile Ile Lys
230	235 240
Glu Arg Lys Gly Arg Asn Phe Ser Gln	His Ile Phe Ile Asp Ser
245	250 255
Leu Val Gln Gly Asn Leu Asn Asp Gln	Gln Ile Leu Glu Asp Ser
260	265 270
Met Ile Phe Ser Leu Ala Ser Cys Ile	Ile Thr Ala Lys Leu Cys
275	280 285
Thr Trp Ala Ile Cys Phe Leu Thr Thr	Ser Glu Glu Val Gln Lys
290	295 300
Lys Leu Tyr Glu Glu Ile Asn Gln Val	Phe Gly Asn Gly Pro Val
305	310 315
Thr Pro Glu Lys Ile Glu Gln Leu Arg	Tyr Cys Gln His Val Leu
320	325 330
Cys Glu Thr Val Arg Thr Ala Lys Leu	Thr Pro Val Ser Ala Gln
335	340 345
Leu Gln Asp Ile Glu Gly Lys Ile Asp	Arg Phe Ile Ile Pro Arg
350	355 360
Glu Thr Leu Val Leu Tyr Ala Leu Gly	Val Val Leu Gln Asp Pro
365	370 375
Asn Thr Trp Pro Ser Pro His Lys Phe	Asp Pro Asp Arg Phe Asp
380	385 390
Asp Glu Leu Val Met Lys Thr Phe Ser	Ser Leu Gly Phe Ser Gly
395	400 405
Thr Gln Glu Cys Pro Glu Leu Arg Phe	Ala Tyr Met Val Thr Thr
410	415 420
Val Leu Leu Ser Val Leu Val Lys Arg	Leu His Leu Leu Ser Val
425	430 435

Glu Gly Gln Val Ile Glu Thr Lys Tyr Glu Leu Val Thr Ser Ser  
440 445 450

Arg Glu Glu Ala Trp Ile Thr Val Ser Lys Arg Tyr  
455 460

```
<210> 213
<211> 759
<212> DNA
<213> Homo sapiens
```

```
<400> 213
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tccagcctca gagaccgccg cccttgtccc cgagggccat gggccgggtc 100
tcagggttg tgccctctcg cttcctgacg ctccctggcg atctggtggt 150
cgtcatcacc ttattctggt cccgggacag caacatacag gcctgcctgc 200
ctctcacgtt ccccccgag gagtatgaca agcaggacat tcagctggtg 250
gccgcgtct ctgtcacctt gggcctcttt gcagtggagc tggccgggtt 300
cctctcagga gtctccatgt tcaacagcac ccagagcctc atctccattg 350
gggctcactg tagtgcattc gtggccctgt ccttcttcat attcgagcgt 400
tgaggagtga ctacgtattg gtacattttt gtcttctgca gtgcccttcc 450
agctgtcact gaaatggctt tattcgtcac cgtctttggg ctgaaaaaga 500
aacccttctg attaccttca tgacgggaac ctaaggacga agcctacagg 550
ggcaagggcc gcttcgtatt cctggaagaa ggaaggcata ggcttcggtt 600
ttcccctcgg aaactgcttc tgctggagga tatgtgttgg aataattacg 650
tcttgagtct gggattatcc gcattgtatt tagtgctttg taataaaata 700
tgttttgtag taacattaag acttatatac agttttaggg gacaattaa 750
aaaaaaaaa 759
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```
<210> 214
<211> 140
<212> PRT
<213> Homo sapiens
```

```

<400> 214
Met Gly Arg Val Ser Gly Leu Val Pro Ser Arg Phe Leu Thr Leu
  1          5          10          15

Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp
          20          25          30

Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu
          35          40          45

```

Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr  
50 55 60  
Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val  
65 70 75  
Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His  
80 85 90  
Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp  
95 100 105  
Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu  
110 115 120  
Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu  
125 130 135  
Lys Lys Lys Pro Phe  
140

<210> 215  
<211> 697  
<212> DNA  
<213> Homo sapiens

<400> 215  
tcccggaccc tgccgccctg ccactatgtc ccgccgctct atgctgcttg 50  
cctgggctct cccagcctc cttcgactcg gagcgggtca ggagacagaa 100  
gaccggcct gctgcagccc catagtgcc cggaacgagt ggaaggccct 150  
ggcatcagag tgcgccagc acctgagcct gcccttacgc tatgtggtgg 200  
tatcgcacac ggcgggcagc agctgcaaca ccccgccctc gtgccagcag 250  
caggcccgga atgtgcagca ctaccacatg aagacactgg gctggtgcga 300  
cgtgggctac aacttcctga ttggagaaga cgggctcgta tacgagggcc 350  
gtggctggaa cttcacgggt gccactcag gtcacttatg gaaccccatg 400  
tccattggca tcagcttcat gggcaactac atggatcggg tgcccacacc 450  
ccaggccatc cgggcagccc aggtctact ggcctgcggt gtggctcagg 500  
gagccctgag gtccaactat gtgctcaaag gacaccggga tgtgcagcgt 550  
acactctctc caggcaacca gctctaccac ctcatccaga attggccaca 600  
ctaccgctcc cctgaggcc ctgctgatcc gcacccatt cctccctcc 650  
catggccaaa aacccactg tctccttctc caataaagat gtagctc 697

<210> 216  
<211> 196  
<212> PRT

<213> Homo sapiens

<400> 216

[illegible]

<210> 217

<211> 1871

<212> DNA

<213> Homo sapiens

<400> 217

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tctatctggt catctgtggc caggatgatg gtcctcccgg ctcagaggac 150  
cctgagcgtg atgaccacga gggccagccc cggccccggg tgcctcgga 200



gcggggccac atctcaccta agtccccccc catggccaat tccactctcc 250  
tagggctgct ggccccgcct ggggaggctt ggggcattct tgggcagccc 300  
cccaaccgcc cgaaccacag cccccaccc tcagccaagg tgaagaaaat 350  
ctttggctgg ggcgacttct actccaacat caagacggtg gccctgaacc 400  
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catttccaac acaatgccac aggccaggga aacatctcca tcagcctcgt 500  
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<211> 252
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<213> Homo sapiens
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Glu	Asp	Pro	Glu	Arg	Asp	Asp	His	Glu	Gly	Gln	Pro	Arg	Pro	Arg
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Val	Pro	Arg	Lys	Arg	Gly	His	Ile	Ser	Pro	Lys	Ser	Arg	Pro	Met
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Ala	Asn	Ser	Thr	Leu	Leu	Gly	Leu	Leu	Ala	Pro	Pro	Gly	Glu	Ala
				65					70					75
Trp	Gly	Ile	Leu	Gly	Gln	Pro	Pro	Asn	Arg	Pro	Asn	His	Ser	Pro
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Pro	Pro	Ser	Ala	Lys	Val	Lys	Lys	Ile	Phe	Gly	Trp	Gly	Asp	Phe
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Tyr	Ser	Asn	Ile	Lys	Thr	Val	Ala	Leu	Asn	Leu	Leu	Val	Thr	Gly
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Lys	Ile	Val	Asp	His	Gly	Asn	Gly	Thr	Phe	Ser	Val	His	Phe	Gln
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His	Asn	Ala	Thr	Gly	Gln	Gly	Asn	Ile	Ser	Ile	Ser	Leu	Val	Pro
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Pro	Ser	Lys	Ala	Val	Glu	Phe	His	Gln	Glu	Gln	Gln	Ile	Phe	Ile
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Glu	Ala	Lys	Ala	Ser	Lys	Ile	Phe	Asn	Cys	Arg	Met	Glu	Trp	Glu
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Lys	Val	Glu	Arg	Gly	Arg	Arg	Thr	Ser	Leu	Cys	Thr	His	Asp	Pro
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Ala	Lys	Ile	Cys	Ser	Arg	Asp	His	Ala	Gln	Ser	Ser	Ala	Thr	Trp
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Ser Cys Ser Gln Pro Phe Lys Val Val Cys Val Tyr Ile Ala Phe  
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<211> 2065

<212> DNA

<213> Homo sapiens

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35 40 45  
Ser Asn Pro Ala Thr Asp Ser Lys Gly Ser Ser Ser Ser Pro Leu  
50 55 60

Gly Ile Ser Val Arg Ala Ala Asn Ser Lys Val Ala Phe Ser Ala  
65 70 75  
Val Arg Ser Thr Asn His Glu Pro Ser Glu Met Ser Asn Lys Thr  
80 85 90  
Arg Ile Ile Tyr Phe Asp Gln Ile Leu Val Asn Val Gly Asn Phe  
95 100 105  
Phe Thr Leu Glu Ser Val Phe Val Ala Pro Arg Lys Gly Ile Tyr  
110 115 120  
Ser Phe Ser Phe His Val Ile Lys Val Tyr Gln Ser Gln Thr Ile  
125 130 135  
Gln Val Asn Leu Met Leu Asn Gly Lys Pro Val Ile Ser Ala Phe  
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Ala Gly Asp Lys Asp Val Thr Arg Glu Ala Ala Thr Asn Gly Val  
155 160 165  
Leu Leu Tyr Leu Asp Lys Glu Asp Lys Val Tyr Leu Lys Leu Glu  
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<213> Artificial

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<223> Synthetic construct.

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<210> 223  
<211> 40



<213> Homo sapiens

<400> 225

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Arg	Ile	Ile	Phe	Leu	Ile	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
				35					40					45	
Leu	Leu	Ile	Ser	Ser	Leu	Val	Trp	Phe	Met	Ala	Arg	Val	Ile	Ile	
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Asp	Asn	Lys	Asp	Gly	Pro	Thr	Gln	Lys	Tyr	Leu	Leu	Ile	Phe	Gly	
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Ala	Phe	Val	Ser	Val	Tyr	Ile	Gln	Glu	Met	Phe	Arg	Phe	Ala	Tyr	
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Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Ser	Glu	Gly	Leu	Lys	Ser	Ile	Asn	
				95					100					105	
Pro	Gly	Glu	Thr	Ala	Pro	Ser	Met	Arg	Leu	Leu	Ala	Tyr	Val	Ser	
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Gly	Leu	Gly	Phe	Gly	Ile	Met	Ser	Gly	Val	Phe	Ser	Phe	Val	Asn	
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Asp	Ser	Pro	Gln	Phe	Phe	Leu	Tyr	Ser	Ala	Phe	Met	Thr	Leu	Val	
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Ile	Ile	Leu	Leu	His	Val	Phe	Trp	Gly	Ile	Val	Phe	Phe	Asp	Gly	
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Cys	Glu	Lys	Lys	Lys	Trp	Gly	Ile	Leu	Leu	Ile	Val	Leu	Leu	Thr	
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His	Leu	Leu	Val	Ser	Ala	Gln	Thr	Phe	Ile	Ser	Ser	Tyr	Tyr	Gly	
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Ile	Asn	Leu	Ala	Ser	Ala	Phe	Ile	Ile	Leu	Val	Leu	Met	Gly	Thr	
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Trp	Ala	Phe	Leu	Ala	Ala	Gly	Gly	Ser	Cys	Arg	Ser	Leu	Lys	Leu	
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Ser Arg

<210> 226





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<212> PRT
<213> Homo sapiens
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 Arg Thr Glu Gly Val Arg Val Ser Val Asn Val Leu Asn Lys Gln  
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 Lys Gly Ala Pro Leu Leu Phe Val Val Arg Gln Lys Glu Ala Val  
 80 85 90  
 Val Ser Phe Gln Val Pro Leu Ile Leu Arg Gly Met Phe Gln Arg  
 95 100 105  
 Lys Tyr Leu Tyr Gln Lys Val Glu Arg Thr Leu Cys Gln Pro Pro  
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 Thr Leu Ser Pro Val Asn Thr Thr Tyr Gln Leu Arg Val Ser Arg  
 140 145 150  
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 Gly Val Asp Ser Val Ile Val Lys Val Thr Ser Asn Lys Ala Phe  
 185 190 195  
 Pro Cys Ser Val Ile Ser Ile Gln Asp Val Leu Cys Pro Val Tyr  
 200 205 210  
 Asp Leu Asp Asn Asn Val Ala Phe Ile Gly Met Tyr Gln Thr Met  
 215 220 225  
 Thr Lys Lys Ala Ala Ile Thr Val Gln Arg Lys Asp Phe Pro Ser  
 230 235 240  
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 260 265 270  
 Val Asp Gln Gly His Arg Gln Lys Thr Leu Ser Val Leu Val Ser  
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 Cys Trp Glu Asn Trp Arg Gln Lys Lys Lys Thr Leu Leu Val Ala

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Glu	Glu	Asp	Asp	Tyr 410	Asp	Thr	Leu	Thr	Asp 415	Ile	Asp	Ser	Asp	Lys 420	
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Trp	Asn	Ile	Ala	Thr 455	Ile	Ala	Val	Phe	Tyr 460	Ala	Leu	Pro	Val	Val 465	
Gln	Leu	Val	Ile	Thr 470	Tyr	Gln	Thr	Val	Val 475	Asn	Val	Thr	Gly	Asn 480	
Gln	Asp	Ile	Cys	Tyr 485	Tyr	Asn	Phe	Leu	Cys 490	Ala	His	Pro	Leu	Gly 495	
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Asp	Ser	Gly	Ile	Phe 665	Arg	Arg	Ile	Leu	His 670	Val	Leu	Tyr	Thr	Asp 675
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Ile	Gly	Ile	Cys	Asn 725	Leu	Leu	Leu	Tyr	Phe 730	Ala	Phe	Tyr	Ile	Ile 735
Met	Lys	Leu	Arg	Ser 740	Gly	Glu	Arg	Ile	Lys 745	Leu	Ile	Pro	Leu	Leu 750
Cys	Ile	Val	Cys	Thr 755	Ser	Val	Val	Trp	Gly 760	Phe	Ala	Leu	Phe	Phe 765
Phe	Phe	Gln	Gly	Leu 770	Ser	Thr	Trp	Gln	Lys 775	Thr	Pro	Ala	Glu	Ser 780
Arg	Glu	His	Asn	Arg 785	Asp	Cys	Ile	Leu	Leu 790	Asp	Phe	Phe	Asp	Asp 795
His	Asp	Ile	Trp	His 800	Phe	Leu	Ser	Ser	Ile 805	Ala	Met	Phe	Gly	Ser 810
Phe	Leu	Val	Leu	Leu 815	Thr	Leu	Asp	Asp	Asp 820	Leu	Asp	Thr	Val	Gln 825
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<212> DNA
<213> Homo sapiens
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gctttgtgtc tccgtccccc aggctctccc caaggcccaq cctqcaqagc 200
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<211> 807

<212> PRT

<213> Homo sapiens

<400> 229

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Glu	Asn	Tyr	Gly	Gly	Asn	Phe	Pro	Leu	Tyr	Leu	Thr	Lys	Leu	Pro					
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Leu	Pro	Arg	Glu	Gly	Ala	Glu	Gly	Gln	Ile	Val	Leu	Ser	Gly	Asp					
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Ser	Gly	Lys	Ala	Thr	Glu	Gly	Pro	Phe	Ala	Met	Asp	Pro	Asp	Ser					
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Gly	Phe	Leu	Leu	Val	Thr	Arg	Ala	Leu	Asp	Arg	Glu	Glu	Gln	Ala					
				80					85					90					
Glu	Tyr	Gln	Leu	Gln	Val	Thr	Leu	Glu	Met	Gln	Asp	Gly	His	Val					
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Leu	Trp	Gly	Pro	Gln	Pro	Val	Leu	Val	His	Val	Lys	Asp	Glu	Asn					
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Asp	Gln	Val	Pro	His	Phe	Ser	Gln	Ala	Ile	Tyr	Arg	Ala	Arg	Leu					
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Ser	Arg	Gly	Thr	Arg	Pro	Gly	Ile	Pro	Phe	Leu	Phe	Leu	Glu	Ala					
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Ser	Asp	Arg	Asp	Glu	Pro	Gly	Thr	Ala	Asn	Ser	Asp	Leu	Arg	Phe					
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His	Ile	Leu	Ser	Gln	Ala	Pro	Ala	Gln	Pro	Ser	Pro	Asp	Met	Phe					
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Gln	Leu	Glu	Pro	Arg	Leu	Gly	Ala	Leu	Ala	Leu	Ser	Pro	Lys	Gly					
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Ser	Thr	Ser	Leu	Asp	His	Ala	Leu	Glu	Arg	Thr	Tyr	Gln	Leu	Leu					
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Val	Gln	Val	Lys	Asp	Met	Gly	Asp	Gln	Ala	Ser	Gly	His	Gln	Ala					
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Thr	Ala	Thr	Val	Glu	Val	Ser	Ile	Ile	Glu	Ser	Thr	Trp	Val	Ser					
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Leu	Glu	Pro	Ile	His	Leu	Ala	Glu	Asn	Leu	Lys	Val	Leu	Tyr	Pro					
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His	His	Met	Ala	Gln	Val	His	Trp	Ser	Gly	Gly	Asp	Val	His	Tyr					
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His	Leu	Glu	Ser	His	Pro	Pro	Gly	Pro	Phe	Glu	Val	Asn	Ala	Glu					
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Gly	Asn	Leu	Tyr	Val	Thr	Arg	Glu	Leu	Asp	Arg	Glu	Ala	Gln	Ala					
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Glu	Tyr	Leu	Leu	Gln	Val	Arg	Ala	Gln	Asn	Ser	His	Gly	Glu	Asp					
				305					310					315					



Tyr	Ala	Ala	Pro	Leu 320	Glu	Leu	His	Val	Leu 325	Val	Met	Asp	Glu	Asn 330
Asp	Asn	Val	Pro	Ile 335	Cys	Pro	Pro	Arg	Asp 340	Pro	Thr	Val	Ser	Ile 345
Pro	Glu	Leu	Ser	Pro 350	Pro	Gly	Thr	Glu	Val 355	Thr	Arg	Leu	Ser	Ala 360
Glu	Asp	Ala	Asp	Ala 365	Pro	Gly	Ser	Pro	Asn 370	Ser	His	Val	Val	Tyr 375
Gln	Leu	Leu	Ser	Pro 380	Glu	Pro	Glu	Asp	Gly 385	Val	Glu	Gly	Arg	Ala 390
Phe	Gln	Val	Asp	Pro 395	Thr	Ser	Gly	Ser	Val 400	Thr	Leu	Gly	Val	Leu 405
Pro	Leu	Arg	Ala	Gly 410	Gln	Asn	Ile	Leu	Leu 415	Leu	Val	Leu	Ala	Met 420
Asp	Leu	Ala	Gly	Ala 425	Glu	Gly	Gly	Phe	Ser 430	Ser	Thr	Cys	Glu	Val 435
Glu	Val	Ala	Val	Thr 440	Asp	Ile	Asn	Asp	His 445	Ala	Pro	Glu	Phe	Ile 450
Thr	Ser	Gln	Ile	Gly 455	Pro	Ile	Ser	Leu	Pro 460	Glu	Asp	Val	Glu	Pro 465
Gly	Thr	Leu	Val	Ala 470	Met	Leu	Thr	Ala	Ile 475	Asp	Ala	Asp	Leu	Glu 480
Pro	Ala	Phe	Arg	Leu 485	Met	Asp	Phe	Ala	Ile 490	Glu	Arg	Gly	Asp	Thr 495
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His	Glu	Val	Val	Val 530	Val	Val	Gln	Ser	Val 535	Ala	Lys	Leu	Val	Gly 540
Pro	Gly	Pro	Gly	Pro 545	Gly	Ala	Thr	Ala	Thr 550	Val	Thr	Val	Leu	Val 555
Glu	Arg	Val	Met	Pro 560	Pro	Pro	Lys	Leu	Asp 565	Gln	Glu	Ser	Tyr	Glu 570
Ala	Ser	Val	Pro	Ile 575	Ser	Ala	Pro	Ala	Gly 580	Ser	Phe	Leu	Leu	Thr 585
Ile	Gln	Pro	Ser	Asp 590	Pro	Ile	Ser	Arg	Thr 595	Leu	Arg	Phe	Ser	Leu 600
Val	Asn	Asp	Ser	Glu	Gly	Trp	Leu	Cys	Ile	Glu	Lys	Phe	Ser	Gly

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Thr Tyr Thr Val	Leu Val Glu Ala Gln Asp Thr Ala Leu Thr Leu	
635	640	645
Ala Pro Val Pro	Ser Gln Tyr Leu Cys Thr Pro Arg Gln Asp His	
650	655	660
Gly Leu Ile Val	Ser Gly Pro Ser Lys Asp Pro Asp Leu Ala Ser	
665	670	675
Gly His Gly Pro	Tyr Ser Phe Thr Leu Gly Pro Asn Pro Thr Val	
680	685	690
Gln Arg Asp Trp	Arg Leu Gln Thr Leu Asn Gly Ser His Ala Tyr	
695	700	705
Leu Thr Leu Ala	Leu His Trp Val Glu Pro Arg Glu His Ile Ile	
710	715	720
Pro Val Val Val	Ser His Asn Ala Gln Met Trp Gln Leu Leu Val	
725	730	735
Arg Val Ile Val	Cys Arg Cys Asn Val Glu Gly Gln Cys Met Arg	
740	745	750
Lys Val Gly Arg	Met Lys Gly Met Pro Thr Lys Leu Ser Ala Val	
755	760	765
Gly Ile Leu Val	Gly Thr Leu Val Ala Ile Gly Ile Phe Leu Ile	
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 <213> Artificial Sequence

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<400> 231  
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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ser Asn Asn Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe  
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 Asn Arg Pro Val Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala  
 65 70 75  
 Phe Lys Ser Phe Leu Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr  
 80 85 90  
 Ile Glu Asp Leu Gln Ala Leu Leu Asp Asn Glu Asp Asp Glu Met  
 95 100 105  
 Gln His Asn Glu Gly Gln Glu Arg Ser Ser Asn Asn Phe Asn Tyr  
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 Gly Ala Tyr His Ser Leu Glu Ala Ile Tyr His Glu Met Asp Asn  
 125 130 135  
 Ile Ala Ala Asp Phe Pro Asp Leu Ala Arg Arg Val Lys Ile Gly  
 140 145 150  
 His Ser Phe Glu Asn Arg Pro Met Tyr Val Leu Lys Phe Ser Thr  
 155 160 165

Gly Lys Gly Val Arg Arg Pro Ala Val Trp Leu Asn Ala Gly Ile  
170 175 180

His Ser Arg Glu Trp Ile Ser Gln Ala Thr Ala Ile Trp Thr Ala  
185 190 195

Arg Lys Ile Val Ser Asp Tyr Gln Arg Asp Pro Ala Ile Thr Ser  
200 205 210

Ile Leu Glu Lys Met Asp Ile Phe Leu Leu Pro Val Ala Asn Pro  
215 220 225

Asp Gly Tyr Val Tyr Thr Gln Thr Gln Asn Arg Leu Trp Arg Lys  
230 235 240

Thr Arg Ser Arg Asn Pro Gly Ser Ser Cys Ile Gly Ala Asp Pro  
245 250 255

Asn Arg Asn Trp Asn Ala Ser Phe Ala Gly Lys Gly Ala Ser Asp  
260 265 270

Asn Pro Cys Ser Glu Val Tyr His Gly Pro His Ala Asn Ser Glu  
275 280 285

Val Glu Val Lys Ser Val Val Asp Phe Ile Gln Lys His Gly Asn  
290 295 300

Phe Lys Gly Phe Ile Asp Leu His Ser Tyr Ser Gln Leu Leu Met  
305 310 315

Tyr Pro Tyr Gly Tyr Ser Val Lys Lys Ala Pro Asp Ala Glu Glu  
320 325 330

Leu Asp Lys Val Ala Arg Leu Ala Ala Lys Ala Leu Ala Ser Val  
335 340 345

Ser Gly Thr Glu Tyr Gln Val Gly Pro Thr Cys Thr Thr Val Tyr  
350 355 360

Pro Ala Ser Gly Ser Ser Ile Asp Trp Ala Tyr Asp Asn Gly Ile  
365 370 375

Lys Phe Ala Phe Thr Phe Glu Leu Arg Asp Thr Gly Thr Tyr Gly  
380 385 390

Phe Leu Leu Pro Ala Asn Gln Ile Ile Pro Thr Ala Glu Glu Thr  
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Trp Leu Gly Leu Lys Thr Ile Met Glu His Val Arg Asp Asn Leu  
410 415 420

Tyr

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<212> DNA  
<213> Homo sapiens

<400> 235

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                     20                    25                    30  
 Pro Arg Pro Ser Ser Thr Lys Ser Thr Pro Ala Ser Gln Val Tyr  
                     35                    40                    45  
 Ser Leu Asn Thr Asp Phe Ala Phe Arg Leu Tyr Arg Arg Leu Val  
                     50                    55                    60  
 Leu Glu Thr Pro Ser Gln Asn Ile Phe Phe Ser Pro Val Ser Val  
                     65                    70                    75  
 Ser Thr Ser Leu Ala Met Leu Ser Leu Gly Ala His Ser Val Thr  
                     80                    85                    90  
 Lys Thr Gln Ile Leu Gln Gly Leu Gly Phe Asn Leu Thr His Thr  
                     95                    100                    105  
 Pro Glu Ser Ala Ile His Gln Gly Phe Gln His Leu Val His Ser  
                     110                    115                    120  
 Leu Thr Val Pro Ser Lys Asp Leu Thr Leu Lys Met Gly Ser Ala  
                     125                    130                    135  
 Leu Phe Val Lys Lys Glu Leu Gln Leu Gln Ala Asn Phe Leu Gly  
                     140                    145                    150  
 Asn Val Lys Arg Leu Tyr Glu Ala Glu Val Phe Ser Thr Asp Phe  
                     155                    160                    165  
 Ser Asn Pro Ser Ile Ala Gln Ala Arg Ile Asn Ser His Val Lys  
                     170                    175                    180  
 Lys Lys Thr Gln Gly Lys Val Val Asp Ile Ile Gln Gly Leu Asp  
                     185                    190                    195  
 Leu Leu Thr Ala Met Val Leu Val Asn His Ile Phe Phe Lys Ala



					200					205					210
Lys	Trp	Glu	Lys	Pro	Phe	His	Leu	Glu	Tyr	Thr	Arg	Lys	Asn	Phe	
				215					220					225	
Pro	Phe	Leu	Val	Gly	Glu	Gln	Val	Thr	Val	Gln	Val	Pro	Met	Met	
				230					235					240	
His	Gln	Lys	Glu	Gln	Phe	Ala	Phe	Gly	Val	Asp	Thr	Glu	Leu	Asn	
				245					250					255	
Cys	Phe	Val	Leu	Gln	Met	Asp	Tyr	Lys	Gly	Asp	Ala	Val	Ala	Phe	
				260					265					270	
Phe	Val	Leu	Pro	Ser	Lys	Gly	Lys	Met	Arg	Gln	Leu	Glu	Gln	Ala	
				275					280					285	
Leu	Ser	Ala	Arg	Thr	Leu	Ile	Lys	Trp	Ser	His	Ser	Leu	Gln	Lys	
				290					295					300	
Arg	Trp	Ile	Glu	Val	Phe	Ile	Pro	Arg	Phe	Ser	Ile	Ser	Ala	Ser	
				305					310					315	
Tyr	Asn	Leu	Glu	Thr	Ile	Leu	Pro	Lys	Met	Gly	Ile	Gln	Asn	Ala	
				320					325					330	
Phe	Asp	Lys	Asn	Ala	Asp	Phe	Ser	Gly	Ile	Ala	Lys	Arg	Asp	Ser	
				335					340					345	
Leu	Gln	Val	Ser	Lys	Ala	Thr	His	Lys	Ala	Val	Leu	Asp	Val	Ser	
				350					355					360	
Glu	Glu	Gly	Thr	Glu	Ala	Thr	Ala	Ala	Thr	Thr	Thr	Lys	Phe	Ile	
				365					370					375	
Val	Arg	Ser	Lys	Asp	Gly	Pro	Ser	Tyr	Phe	Thr	Val	Ser	Phe	Asn	
				380					385					390	
Arg	Thr	Phe	Leu	Met	Met	Ile	Thr	Asn	Lys	Ala	Thr	Asp	Gly	Ile	
				395					400					405	
Leu	Phe	Leu	Gly	Lys	Val	Glu	Asn	Pro	Thr	Lys	Ser				
				410					415						

<210> 237

<211> 23

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-23

<223> Synthetic construct.

<400> 237

caaccatgca aggacagggc agg 23

<210> 238

<211> 47  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-47  
 <223> Synthetic construct.

<400> 238  
 ctttgctgtt ggcctctgtg ctcccaacca tgcaaggaca gggcagg 47

<210> 239  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 239  
 tgactcgggg tctccaaaac cagc 24

<210> 240  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 240  
 ggtataggcg gaaggcaaag tcgg 24

<210> 241  
 <211> 48  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-48  
 <223> Synthetic construct.

<400> 241  
 ggcattcttac ctttatggag tactctttgc tgttggcctc tgtgctcc 48

<210> 242  
 <211> 2436  
 <212> DNA  
 <213> Homo sapiens

<400> 242  
 ggctgaccgt gctacattgc ctggaggaag cctaaggaac ccaggcatcc 50

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ctttctcaag	aatcctctgt	tctttgccct	ctaaagtctt	ggtacatcta	200
ggaccaggc	atcttgcttt	ccagccacaa	agagacagat	gaagatgcag	250
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aacaaattcc	aatgagacta	gcacctctgc	caacactgga	tccagtgtga	350
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gcacagccac	caactctgag	ttcagcacag	cgtccagtgg	gatcagcata	550
gccaccaact	ctgagtccag	cacaacctcc	agtggggcca	gcacagccac	600
caactctgag	tccagcacac	cctccagtgg	ggccagcaca	gtcaccaact	650
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tgtccagtgg	gatcagcaca	gtcaccaatt	ctgagtccag	cacacctcc	1300
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gccaccaact	ctgagtccag	cacaacctcc	agtggggcta	gcacagccac	1500

caactctgac tccagcacia cctccagtga ggccagcaca gccaccaact 1550  
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gtggagtcct aactggttct ggaggagacc agtatcatcg atagccatgg 2000  
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cattcatccc aggagacccc tccagcttt gtttgagatc ctgaaaatct 2150  
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aatactatat tgctcattta gctaagaaat aaatacatct catctaacac 2250  
acacgacaaa gagaagctgt gcttgccccg ggggtgggtat ctagctctga 2300  
gatgaactca gttataggag aaaacctcca tgctggactc catctggcat 2350  
tcaaaatctc cacagtaaaa tccaaagacc tcaaaaaaaaa aaaaaaaaaa 2400  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2436

<210> 243  
<211> 596  
<212> PRT  
<213> Homo sapiens

<400> 243  
Met Lys Met Gln Lys Gly Asn Val Leu Leu Met Phe Gly Leu Leu  
1 5 10 15  
Leu His Leu Glu Ala Ala Thr Asn Ser Asn Glu Thr Ser Thr Ser  
20 25 30  
Ala Asn Thr Gly Ser Ser Val Ile Ser Ser Gly Ala Ser Thr Ala  
35 40 45  
Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Val Ser Thr Ala  
50 55 60  
Thr Ile Ser Gly Ser Ser Val Thr Ser Asn Gly Val Ser Ile Val  
65 70 75

Thr	Asn	Ser	Glu	Phe	His	Thr	Thr	Ser	Ser	Gly	Ile	Ser	Thr	Ala	
				80					85					90	
Thr	Asn	Ser	Glu	Phe	Ser	Thr	Ala	Ser	Ser	Gly	Ile	Ser	Ile	Ala	
				95					100					105	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				110					115					120	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Pro	Ser	Ser	Gly	Ala	Ser	Thr	Val	
				125					130					135	
Thr	Asn	Ser	Gly	Ser	Ser	Val	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				140					145					150	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Arg	Ala	Ser	Thr	Ala	
				155					160					165	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Leu	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				170					175					180	
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				185					190					195	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				200					205					210	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Arg	Ala	Ser	Thr	Ala	
				215					220					225	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				230					235					240	
Thr	Asn	Ser	Glu	Ser	Arg	Thr	Thr	Ser	Asn	Gly	Ala	Gly	Thr	Ala	
				245					250					255	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				260					265					270	
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Val	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				275					280					285	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				290					295					300	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	
				305					310					315	
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Gly	Thr	Ala	
				320					325					330	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Gly	Ile	Ser	Thr	Val	
				335					340					345	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Pro	Ser	Ser	Gly	Ala	Asn	Thr	Ala	
				350					355					360	
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Asn	Thr	Ala	

	365	370	375
Thr Asn Ser Glu	Ser Ser Thr Val Ser	Ser Gly Ala Ser Thr	Ala
	380	385	390
Thr Asn Ser Glu	Ser Ser Thr Thr Ser	Ser Gly Val Ser Thr	Ala
	395	400	405
Thr Asn Ser Glu	Ser Ser Thr Thr Ser	Ser Gly Ala Ser Thr	Ala
	410	415	420
Thr Asn Ser Asp	Ser Ser Thr Thr Ser	Ser Glu Ala Ser Thr	Ala
	425	430	435
Thr Asn Ser Glu	Ser Ser Thr Val Ser	Ser Gly Ile Ser Thr	Val
	440	445	450
Thr Asn Ser Glu	Ser Ser Thr Thr Ser	Ser Gly Ala Asn Thr	Ala
	455	460	465
Thr Asn Ser Gly	Ser Ser Val Thr Ser	Ala Gly Ser Gly Thr	Ala
	470	475	480
Ala Leu Thr Gly	Met His Thr Thr Ser	His Ser Ala Ser Thr	Ala
	485	490	495
Val Ser Glu Ala	Lys Pro Gly Gly Ser	Leu Val Pro Trp Glu	Ile
	500	505	510
Phe Leu Ile Thr	Leu Val Ser Val Val	Ala Ala Val Gly Leu	Phe
	515	520	525
Ala Gly Leu Phe	Phe Cys Val Arg Asn	Ser Leu Ser Leu Arg	Asn
	530	535	540
Thr Phe Asn Thr	Ala Val Tyr His Pro	His Gly Leu Asn His	Gly
	545	550	555
Leu Gly Pro Gly	Pro Gly Gly Asn His	Gly Ala Pro His Arg	Pro
	560	565	570
Arg Trp Ser Pro	Asn Trp Phe Trp Arg	Arg Pro Val Ser Ser	Ile
	575	580	585
Ala Met Glu Met	Ser Gly Arg Asn Ser	Gly Pro	
	590	595	

<210> 244  
 <211> 26  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-26  
 <223> Synthetic construct.

<400> 244

gaagcaccag cctttatctc ttcacc 26

<210> 245  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic sequence.

<400> 245  
 gtcagagttg gtggctgtgc tagc 24

<210> 246  
 <211> 48  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-48  
 <223> Synthetic construct.

<400> 246  
 ggacccaggc atottgcttt ccagccacaa agagacagat gaagatgc 48

<210> 247  
 <211> 957  
 <212> DNA  
 <213> Homo sapiens

<400> 247  
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 ttcccgacct tccagcaat atgcatcttg cacgtctggc cggctcctgc 100  
 tccctccttc tgctactggg ggccctgtct ggatgggagg ccagcgatga 150  
 cccattgag aaggctattg aagggatcaa ccgagggctg agcaatgcag 200  
 agagagaggt gggcaaggcc ctggatggca tcaacagtgg aatcacgcat 250  
 gccggaaggg aagtggagaa ggttttcaac ggacttagca acatggggag 300  
 ccacaccggc aaggagttgg acaaaggcgt ccaggggctc aaccacggca 350  
 tggacaaggt tgcccatgag atcaaccatg gtattggaca agcaggaaag 400  
 gaagcagaga agcttgcca tggggtcaac aacgctgctg gacaggccgg 450  
 gaaggaagca gacaaagcgg tccaagggtt ccacactggg gtccaccagg 500  
 ctgggaagga agcagagaaa cttggccaag gggtaacca tgctgctgac 550  
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tggccaggcc gggaaggagc tgcagaatgc tcataatggg gtcaaccaag 650  
ccagcaagga ggccaaccag ctgctgaatg gcaaccatca aagcggatct 700  
tccagccatc aaggaggggc cacaaccacg ccgttagcct ctggggcctc 750  
agtcaacacg cctttcatca accttcccgc cctgtggagg agcgtcgcca 800  
acatcatgcc ctaaactggc atccggcctt gctgggagaa taatgtcgcc 850  
gttgtcacat cagctgacat gacctggagg ggttgggggt gggggacagg 900  
tttctgaaat ccctgaaggg ggttgtactg ggatttgtga ataaacttga 950  
tacacca 957

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<210> 248
<211> 247
<212> PRT
<213> Homo sapiens
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<400> 248														
Met	His	Leu	Ala	Arg	Leu	Val	Gly	Ser	Cys	Ser	Leu	Leu	Leu	Leu
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Leu	Gly	Ala	Leu	Ser	Gly	Trp	Ala	Ala	Ser	Asp	Asp	Pro	Ile	Glu
				20					25					30
Lys	Val	Ile	Glu	Gly	Ile	Asn	Arg	Gly	Leu	Ser	Asn	Ala	Glu	Arg
				35					40					45
Glu	Val	Gly	Lys	Ala	Leu	Asp	Gly	Ile	Asn	Ser	Gly	Ile	Thr	His
				50					55					60
Ala	Gly	Arg	Glu	Val	Glu	Lys	Val	Phe	Asn	Gly	Leu	Ser	Asn	Met
				65					70					75
Gly	Ser	His	Thr	Gly	Lys	Glu	Leu	Asp	Lys	Gly	Val	Gln	Gly	Leu
				80					85					90
Asn	His	Gly	Met	Asp	Lys	Val	Ala	His	Glu	Ile	Asn	His	Gly	Ile
				95					100					105
Gly	Gln	Ala	Gly	Lys	Glu	Ala	Glu	Lys	Leu	Gly	His	Gly	Val	Asn
				110					115					120
Asn	Ala	Ala	Gly	Gln	Ala	Gly	Lys	Glu	Ala	Asp	Lys	Ala	Val	Gln
				125					130					135
Gly	Phe	His	Thr	Gly	Val	His	Gln	Ala	Gly	Lys	Glu	Ala	Glu	Lys
				140					145					150
Leu	Gly	Gln	Gly	Val	Asn	His	Ala	Ala	Asp	Gln	Ala	Gly	Lys	Glu
				155					160					165
Val	Glu	Lys	Leu	Gly	Gln	Gly	Ala	His	His	Ala	Ala	Gly	Gln	Ala
				170					175					180



Gly Lys Glu Leu Gln Asn Ala His Asn Gly Val Asn Gln Ala Ser  
185 190 195

Lys Glu Ala Asn Gln Leu Leu Asn Gly Asn His Gln Ser Gly Ser  
200 205 210

Ser Ser His Gln Gly Gly Ala Thr Thr Thr Pro Leu Ala Ser Gly  
215 220 225

Ala Ser Val Asn Thr Pro Phe Ile Asn Leu Pro Ala Leu Trp Arg  
230 235 240

Ser Val Ala Asn Ile Met Pro  
245

<210> 249  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-23  
<223> Synthetic construct.

<400> 249  
caatatgcat cttgcacgtc tgg 23

<210> 250  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 250  
aagcttctct gcttcctttc ctgc 24

<210> 251  
<211> 43  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-43  
<223> Synthetic construct.

<400> 251  
tgacccatt gagaaggta ttgaaggat caaccgagg ctg 43

<210> 252  
<211> 3781  
<212> DNA  
<213> Homo sapiens

<400> 252

ctccgggtcc ccaggggctg cgccgggccg gcctggcaag ggggacgagt 50  
 cagtggacac tccaggaaga gcggccccgc ggggggcgat gaccgtgcgc 100  
 tgacctgac tcactccagg tccggaggcg ggggcccccg gggcgactcg 150  
 ggggcggacc gcggggcgga gctgcgcgcc gtgagtccgg ccgagccacc 200  
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 aaggcgatga tgacaagatc tactttttct tcagcgagac tggccaggaa 1050  
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 gaccacccg gtgcccacac cccggcctgg agcgtgcac accaacagt 1450

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cgccccggac	ccctactgtg	cttgagagcg	ctccagctgc	aagcacgtca	1900
gcctctacca	gcctcagctg	gccaccaggc	cgtggatcca	ggacatcgag	1950
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ttttgtacca	acaggggaga	agccatgtga	gcaagtccag	ttccagccca	2050
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Val Pro Thr Pro	Arg Pro Gly Ala Cys	Ile Thr Asn Ser Ala	Arg
395		400	405
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425		430	435
Arg Met Leu Leu	Leu Gln Pro Gln Ala	Arg Tyr Gln Arg Val	Ala
440		445	450
Val His Arg Val	Pro Gly Leu His His	Thr Tyr Asp Val Leu	Phe
455		460	465
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Pro Arg Val His	Ile Ile Glu Glu Leu	Gln Ile Phe Ser Ser	Gly
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Gln Pro Val Gln	Asn Leu Leu Leu Asp	Thr His Arg Gly Leu	Leu
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Tyr Ala Ala Ser	His Ser Gly Val Val	Gln Val Pro Met Ala	Asn
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Cys Ser Leu Tyr	Arg Ser Cys Gly Asp	Cys Leu Leu Ala Arg	Asp
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Pro Tyr Cys Ala	Trp Ser Gly Ser Ser	Cys Lys His Val Ser	Leu
545		550	555
Tyr Gln Pro Gln	Leu Ala Thr Arg Pro	Trp Ile Gln Asp Ile	Glu
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Gly Ala Ser Ala	Lys Asp Leu Cys Ser	Ala Ser Ser Val Val	Ser
575		580	585
Pro Ser Phe Val	Pro Thr Gly Glu Lys	Pro Cys Glu Gln Val	Gln
590		595	600
Phe Gln Pro Asn	Thr Val Asn Thr Leu	Ala Cys Pro Leu Leu	Ser
605		610	615
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620		625	630
Ala Ser Ala Ser	Cys His Val Leu Pro	Thr Gly Asp Leu Leu	Leu
635		640	645
Val Gly Thr Gln	Gln Leu Gly Glu Phe	Gln Cys Trp Ser Leu	Glu
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Glu Gly Phe Gln	Gln Leu Val Ala Ser	Tyr Cys Pro Glu Val	Val

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695	700	705
Ala Ser Trp Gly Ala Asp Arg Ser Tyr	Trp Lys Glu Phe Leu Val	
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Met Cys Thr Leu Phe Val Leu Ala Val	Leu Leu Pro Val Leu Phe	
725	730	735
Leu Leu Tyr Arg His Arg Asn Ser Met	Lys Val Phe Leu Lys Gln	
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Gly Glu Cys Ala Ser Val His Pro Lys	Thr Cys Pro Val Val Leu	
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770	775	780
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785	790	795
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<210> 260

<211> 802

<212> PRT

<213> Homo sapiens

<400> 260

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Ala	Ser	Glu	Leu	Lys	Arg	Ala	Gly	Pro	Arg	Arg	Arg	Ala	Ser	Pro	35	40	45	
Glu	Gly	Cys	Arg	Ser	Gly	Gln	Ala	Ala	Ala	Ser	Gln	Ala	Gly	Gly	50	55	60	
Ala	Arg	Gly	Asp	Ala	Arg	Gly	Ala	Gln	Leu	Trp	Pro	Pro	Gly	Ser	65	70	75	
Asp	Pro	Asp	Gly	Gly	Pro	Arg	Asp	Arg	Asn	Phe	Leu	Phe	Val	Gly	80	85	90	
Val	Met	Thr	Ala	Gln	Lys	Tyr	Leu	Gln	Thr	Arg	Ala	Val	Ala	Ala	95	100	105	
Tyr	Arg	Thr	Trp	Ser	Lys	Thr	Ile	Pro	Gly	Lys	Val	Gln	Phe	Phe	110	115	120	
Ser	Ser	Glu	Gly	Ser	Asp	Thr	Ser	Val	Pro	Ile	Pro	Val	Val	Pro	125	130	135	
Leu	Arg	Gly	Val	Asp	Asp	Ser	Tyr	Pro	Pro	Gln	Lys	Lys	Ser	Phe	140	145	150	
Met	Met	Leu	Lys	Tyr	Met	His	Asp	His	Tyr	Leu	Asp	Lys	Tyr	Glu	155	160	165	
Trp	Phe	Met	Arg	Ala	Asp	Asp	Asp	Val	Tyr	Ile	Lys	Gly	Asp	Arg	170	175	180	
Leu	Glu	Asn	Phe	Leu	Arg	Ser	Leu	Asn	Ser	Ser	Glu	Pro	Leu	Phe	185	190	195	
Leu	Gly	Gln	Thr	Gly	Leu	Gly	Thr	Thr	Glu	Glu	Met	Gly	Lys	Leu	200	205	210	
Ala	Leu	Glu	Pro	Gly	Glu	Asn	Phe	Cys	Met	Gly	Gly	Pro	Gly	Val	215	220	225	
Ile	Met	Ser	Arg	Glu	Val	Leu	Arg	Arg	Met	Val	Pro	His	Ile	Gly	230	235	240	

Lys Cys Leu Arg	Glu Met Tyr Thr Thr	His Glu Asp Val Glu Val	245	250	255
Gly Arg Cys Val	Arg Arg Phe Ala Gly	Val Gln Cys Val Trp Ser	260	265	270
Tyr Glu Met Arg	Gln Leu Phe Tyr Glu	Asn Tyr Glu Gln Asn Lys	275	280	285
Lys Gly Tyr Ile	Arg Asp Leu His Asn	Ser Lys Ile His Gln Ala	290	295	300
Ile Thr Leu His	Pro Asn Lys Asn Pro	Pro Tyr Gln Tyr Arg Leu	305	310	315
His Ser Tyr Met	Leu Ser Arg Lys Ile	Ser Glu Leu Arg His Arg	320	325	330
Thr Ile Gln Leu	His Arg Glu Ile Val	Leu Met Ser Lys Tyr Ser	335	340	345
Asn Thr Glu Ile	His Lys Glu Asp Leu	Gln Leu Gly Ile Pro Pro	350	355	360
Ser Phe Met Arg	Phe Gln Pro Arg Gln	Arg Glu Glu Ile Leu Glu	365	370	375
Trp Glu Phe Leu	Thr Gly Lys Tyr Leu	Tyr Ser Ala Val Asp Gly	380	385	390
Gln Pro Pro Arg	Arg Gly Met Asp Ser	Ala Gln Arg Glu Ala Leu	395	400	405
Asp Asp Ile Val	Met Gln Val Met Glu	Met Ile Asn Ala Asn Ala	410	415	420
Lys Thr Arg Gly	Arg Ile Ile Asp Phe	Lys Glu Ile Gln Tyr Gly	425	430	435
Tyr Arg Arg Val	Asn Pro Met Tyr Gly	Ala Glu Tyr Ile Leu Asp	440	445	450
Leu Leu Leu Leu	Tyr Lys Lys His Lys	Gly Lys Lys Met Thr Val	455	460	465
Pro Val Arg Arg	His Ala Tyr Leu Gln	Gln Thr Phe Ser Lys Ile	470	475	480
Gln Phe Val Glu	His Glu Glu Leu Asp	Ala Gln Glu Leu Ala Lys	485	490	495
Arg Ile Asn Gln	Glu Ser Gly Ser Leu	Ser Phe Leu Ser Asn Ser	500	505	510
Leu Lys Lys Leu	Val Pro Phe Gln Leu	Pro Gly Ser Lys Ser Glu	515	520	525
His Lys Glu Pro	Lys Asp Lys Lys Ile	Asn Ile Leu Ile Pro Leu			

530										535					540				
Ser	Gly	Arg	Phe	Asp	Met	Phe	Val	Arg		Phe	Met	Gly	Asn	Phe	Glu				
				545						550					555				
Lys	Thr	Cys	Leu	Ile	Pro	Asn	Gln	Asn		Val	Lys	Leu	Val	Val	Leu				
				560						565					570				
Leu	Phe	Asn	Ser	Asp	Ser	Asn	Pro	Asp		Lys	Ala	Lys	Gln	Val	Glu				
				575						580					585				
Leu	Met	Arg	Asp	Tyr	Arg	Ile	Lys	Tyr		Pro	Lys	Ala	Asp	Met	Gln				
				590						595					600				
Ile	Leu	Pro	Val	Ser	Gly	Glu	Phe	Ser		Arg	Ala	Leu	Ala	Leu	Glu				
				605						610					615				
Val	Gly	Ser	Ser	Gln	Phe	Asn	Asn	Glu		Ser	Leu	Leu	Phe	Phe	Cys				
				620						625					630				
Asp	Val	Asp	Leu	Val	Phe	Thr	Thr	Glu		Phe	Leu	Gln	Arg	Cys	Arg				
				635						640					645				
Ala	Asn	Thr	Val	Leu	Gly	Gln	Gln	Ile		Tyr	Phe	Pro	Ile	Ile	Phe				
				650						655					660				
Ser	Gln	Tyr	Asp	Pro	Lys	Ile	Val	Tyr		Ser	Gly	Lys	Val	Pro	Ser				
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Asp	Asn	His	Phe	Ala	Phe	Thr	Gln	Lys		Thr	Gly	Phe	Trp	Arg	Asn				
				680						685					690				
Tyr	Gly	Phe	Gly	Ile	Thr	Cys	Ile	Tyr		Lys	Gly	Asp	Leu	Val	Arg				
				695						700					705				
Val	Gly	Gly	Phe	Asp	Val	Ser	Ile	Gln		Gly	Trp	Gly	Leu	Glu	Asp				
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Val	Asp	Leu	Phe	Asn	Lys	Val	Val	Gln		Ala	Gly	Leu	Lys	Thr	Phe				
				725						730					735				
Arg	Ser	Gln	Glu	Val	Gly	Val	Val	His		Val	His	His	Pro	Val	Phe				
				740						745					750				
Cys	Asp	Pro	Asn	Leu	Asp	Pro	Lys	Gln		Tyr	Lys	Met	Cys	Leu	Gly				
				755						760					765				
Ser	Lys	Ala	Ser	Thr	Tyr	Gly	Ser	Thr		Gln	Gln	Leu	Ala	Glu	Met				
				770						775					780				
Trp	Leu	Glu	Lys	Asn	Asp	Pro	Ser	Tyr		Ser	Lys	Ser	Ser	Asn	Asn				
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Asn	Gly	Ser	Val	Arg	Thr	Ala													
				800															

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<212> DNA  
<213> Artificial

<220>  
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<222> 1-24  
<223> Synthetic construct.

<400> 261  
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<210> 262  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 262  
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<210> 263  
<211> 46  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-46  
<223> Synthetic construct.

<400> 263  
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<210> 264  
<211> 1419  
<212> DNA  
<213> Homo sapiens

<400> 264  
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gttccggtcg catggcagag tgctacggac gacgcctatg aagcccttag 150  
tccttctagt tgcgcttttg ctatggcctt cgtctgtgcc ggcttatccg 200  
agcataactg tgacacctga tgaagagcaa aacttgaatc attatataca 250  
agtttttagag aacctagtac gaagtgttcc ctctggggag ccaggtcgtg 300  
agaaaaaatc taactctcca aaacatgttt attctatagc atcaaaggga 350  
tcaaaattta aggagctagt tacacatgga gacgcttcaa ctgagaatga 400

tgtttttaacc	aatcctatca	gtgaagaaac	tacaactttc	cctacaggag	450
gcttcacacc	ggaaatagga	aagaaaaaac	acacggaaag	taccccatte	500
tggtcgatca	aaccaaaca	tgtttccatt	gttttgcatt	cagaggaacc	550
ttatatggaa	aatgaagagc	cagagccaga	gccggagcca	gctgcaaaac	600
aaactgaggc	accaagaatg	ttgccagttg	ttactgaatc	atctacaagt	650
ccatatgtta	cctcatata	gtcacctgtc	accactttag	ataagagcac	700
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ctgcattttt	tcacaggaga	aataatcata	ttcgtaattt	caaaagttgt	1300
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<210> 265

<211> 350

<212> PRT

<213> Homo sapiens

<400> 265

Met Lys Pro Leu Val Leu Leu Val Ala Leu Leu Leu Trp Pro Ser  
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Ser Val Pro Ala Tyr Pro Ser Ile Thr Val Thr Pro Asp Glu Glu  
20 25 30

Gln Asn Leu Asn His Tyr Ile Gln Val Leu Glu Asn Leu Val Arg  
35 40 45

Ser Val Pro Ser Gly Glu Pro Gly Arg Glu Lys Lys Ser Asn Ser



[illegible]

					50					55					60	
Pro	Lys	His	Val	Tyr	65	Ser	Ile	Ala	Ser	Lys	Gly	Ser	Lys	Phe	Lys	75
Glu	Leu	Val	Thr	His	80	Gly	Asp	Ala	Ser	Thr	Glu	Asn	Asp	Val	Leu	90
Thr	Asn	Pro	Ile	Ser	95	Glu	Glu	Thr	Thr	Thr	Phe	Pro	Thr	Gly	Gly	105
Phe	Thr	Pro	Glu	Ile	110	Gly	Lys	Lys	Lys	His	Thr	Glu	Ser	Thr	Pro	120
Phe	Trp	Ser	Ile	Lys	125	Pro	Asn	Asn	Val	Ser	Ile	Val	Leu	His	Ala	135
Glu	Glu	Pro	Tyr	Ile	140	Glu	Asn	Glu	Glu	Pro	Glu	Pro	Glu	Pro	Glu	150
Pro	Ala	Ala	Lys	Gln	155	Thr	Glu	Ala	Pro	Arg	Met	Leu	Pro	Val	Val	165
Thr	Glu	Ser	Ser	Thr	170	Ser	Pro	Tyr	Val	Thr	Ser	Tyr	Lys	Ser	Pro	180
Val	Thr	Thr	Leu	Asp	185	Lys	Ser	Thr	Gly	Ile	Glu	Ile	Ser	Thr	Glu	195
Ser	Glu	Asp	Val	Pro	200	Gln	Leu	Ser	Gly	Glu	Thr	Ala	Ile	Glu	Lys	210
Pro	Glu	Glu	Phe	Gly	215	Lys	His	Pro	Glu	Ser	Trp	Asn	Asn	Asp	Asp	225
Ile	Leu	Lys	Lys	Ile	230	Leu	Asp	Ile	Asn	Ser	Gln	Val	Gln	Gln	Ala	240
Leu	Leu	Ser	Asp	Thr	245	Ser	Asn	Pro	Ala	Tyr	Arg	Glu	Asp	Ile	Glu	255
Ala	Ser	Lys	Asp	His	260	Leu	Lys	Arg	Ser	Leu	Ala	Leu	Ala	Ala	Ala	270
Ala	Glu	His	Lys	Leu	275	Lys	Thr	Met	Tyr	Lys	Ser	Gln	Leu	Leu	Pro	285
Val	Gly	Arg	Thr	Ser	290	Asn	Lys	Ile	Asp	Asp	Ile	Glu	Thr	Val	Ile	300
Asn	Met	Leu	Cys	Asn	305	Ser	Arg	Ser	Lys	Leu	Tyr	Glu	Tyr	Leu	Asp	315
Ile	Lys	Cys	Val	Pro	320	Pro	Glu	Met	Arg	Glu	Lys	Ala	Ala	Thr	Val	330
Phe	Asn	Thr	Leu	Lys	335	Asn	Met	Cys	Arg	Ser	Arg	Arg	Val	Thr	Ala	345



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ccaacaatgg gtattgggtc ctcagactga caacagaaca tttgtatttc 1300
acattcaatc cccattttat cagcctcccc ccagcacccc ctcctacacg 1350
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cttaaagggc cccacaccac agaccagac acagccaagg gagagtgtc 1600
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ataaagagga ggtaggattt ttactgatt ctataagccc agcattacct 2150
gatacaaaaa ccaggcaaag aaaacagaag aagaggaagg aaaactacag 2200
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<210> 267
<211> 466
<212> PRT
<213> Homo sapiens

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<400> 267
Met Ala Phe Val Leu Ile Leu Val Leu Ser Phe Tyr Glu Leu Val
  1           5           10           15
Ser Gly Gln Trp Gln Val Thr Gly Pro Gly Lys Phe Val Gln Ala

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20										25					30				
Leu	Val	Gly	Glu	Asp 35	Ala	Val	Phe	Ser	Cys 40	Ser	Leu	Phe	Pro	Glu 45					
Thr	Ser	Ala	Glu	Ala 50	Met	Glu	Val	Arg	Phe 55	Phe	Arg	Asn	Gln	Phe 60					
His	Ala	Val	Val	His 65	Leu	Tyr	Arg	Asp	Gly 70	Glu	Asp	Trp	Glu	Ser 75					
Lys	Gln	Met	Pro	Gln 80	Tyr	Arg	Gly	Arg	Thr 85	Glu	Phe	Val	Lys	Asp 90					
Ser	Ile	Ala	Gly	Gly 95	Arg	Val	Ser	Leu	Arg 100	Leu	Lys	Asn	Ile	Thr 105					
Pro	Ser	Asp	Ile	Gly 110	Leu	Tyr	Gly	Cys	Trp 115	Phe	Ser	Ser	Gln	Ile 120					
Tyr	Asp	Glu	Glu	Ala 125	Thr	Trp	Glu	Leu	Arg 130	Val	Ala	Ala	Leu	Gly 135					
Ser	Leu	Pro	Leu	Ile 140	Ser	Ile	Val	Gly	Tyr 145	Val	Asp	Gly	Gly	Ile 150					
Gln	Leu	Leu	Cys	Leu 155	Ser	Ser	Gly	Trp	Phe 160	Pro	Gln	Pro	Thr	Ala 165					
Lys	Trp	Lys	Gly	Pro 170	Gln	Gly	Gln	Asp	Leu 175	Ser	Ser	Asp	Ser	Arg 180					
Ala	Asn	Ala	Asp	Gly 185	Tyr	Ser	Leu	Tyr	Asp 190	Val	Glu	Ile	Ser	Ile 195					
Ile	Val	Gln	Glu	Asn 200	Ala	Gly	Ser	Ile	Leu 205	Cys	Ser	Ile	His	Leu 210					
Ala	Glu	Gln	Ser	His 215	Glu	Val	Glu	Ser	Lys 220	Val	Leu	Ile	Gly	Glu 225					
Thr	Phe	Phe	Gln	Pro 230	Ser	Pro	Trp	Arg	Leu 235	Ala	Ser	Ile	Leu	Leu 240					
Gly	Leu	Leu	Cys	Gly 245	Ala	Leu	Cys	Gly	Val 250	Val	Met	Gly	Met	Ile 255					
Ile	Val	Phe	Phe	Lys 260	Ser	Lys	Gly	Lys	Ile 265	Gln	Ala	Glu	Leu	Asp 270					
Trp	Arg	Arg	Lys	His 275	Gly	Gln	Ala	Glu	Leu 280	Arg	Asp	Ala	Arg	Lys 285					
His	Ala	Val	Glu	Val 290	Thr	Leu	Asp	Pro	Glu 295	Thr	Ala	His	Pro	Lys 300					
Leu	Cys	Val	Ser	Asp 305	Leu	Lys	Thr	Val	Thr 310	His	Arg	Lys	Ala	Pro 315					

Gln Glu Val Pro His Ser Glu Lys Arg Phe Thr Arg Lys Ser Val  
320 325 330

Val Ala Ser Gln Gly Phe Gln Ala Gly Arg His Tyr Trp Glu Val  
335 340 345

Asp Val Gly Gln Asn Val Gly Trp Tyr Val Gly Val Cys Arg Asp  
350 355 360

Asp Val Asp Arg Gly Lys Asn Asn Val Thr Leu Ser Pro Asn Asn  
365 370 375

Gly Tyr Trp Val Leu Arg Leu Thr Thr Glu His Leu Tyr Phe Thr  
380 385 390

Phe Asn Pro His Phe Ile Ser Leu Pro Pro Ser Thr Pro Pro Thr  
395 400 405

Arg Val Gly Val Phe Leu Asp Tyr Glu Gly Gly Thr Ile Ser Phe  
410 415 420

Phe Asn Thr Asn Asp Gln Ser Leu Ile Tyr Thr Leu Leu Thr Cys  
425 430 435

Gln Phe Glu Gly Leu Leu Arg Pro Tyr Ile Gln His Ala Met Tyr  
440 445 450

Asp Glu Glu Lys Gly Thr Pro Ile Phe Ile Cys Pro Val Ser Trp  
455 460 465

Gly

<210> 268  
<211> 2103  
<212> DNA  
<213> Homo sapiens

<400> 268  
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gtcatcttca tatccctgat tgccttgga gtgtgcattg gactcactgt 150  
tcattatgtg agatataatc aaaagaagac ctacaattac tatagcacat 200  
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<210> 269
<211> 423
<212> PRT
<213> Homo sapiens
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<400> 269														
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Trp	Glu	Pro	Trp	Val	Ile	Gly	Leu	Val	Ile	Phe	Ile	Ser	Leu	Ile
				20					25					30
Val	Leu	Ala	Val	Cys	Ile	Gly	Leu	Thr	Val	His	Tyr	Val	Arg	Tyr
				35					40					45
Asn	Gln	Lys	Lys	Thr	Tyr	Asn	Tyr	Tyr	Ser	Thr	Leu	Ser	Phe	Thr
				50					55					60
Thr	Asp	Lys	Leu	Tyr	Ala	Glu	Phe	Gly	Arg	Glu	Ala	Ser	Asn	Asn
				65					70					75
Phe	Thr	Glu	Met	Ser	Gln	Arg	Leu	Glu	Ser	Met	Val	Lys	Asn	Ala
				80					85					90
Phe	Tyr	Lys	Ser	Pro	Leu	Arg	Glu	Glu	Phe	Val	Lys	Ser	Gln	Val
				95					100					105
Ile	Lys	Phe	Ser	Gln	Gln	Lys	His	Gly	Val	Leu	Ala	His	Met	Leu
				110					115					120
Leu	Ile	Cys	Arg	Phe	His	Ser	Thr	Glu	Asp	Pro	Glu	Thr	Val	Asp
				125					130					135
Lys	Ile	Val	Gln	Leu	Val	Leu	His	Glu	Lys	Leu	Gln	Asp	Ala	Val
				140					145					150
Gly	Pro	Pro	Lys	Val	Asp	Pro	His	Ser	Val	Lys	Ile	Lys	Lys	Ile
				155					160					165
Asn	Lys	Thr	Glu	Thr	Asp	Ser	Tyr	Leu	Asn	His	Cys	Cys	Gly	Thr
				170					175					180
Arg	Arg	Ser	Lys	Thr	Leu	Gly	Gln	Ser	Leu	Arg	Ile	Val	Gly	Gly
				185					190					195
Thr	Glu	Val	Glu	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu	Gln
				200					205					210
Trp	Asp	Gly	Ser	His	Arg	Cys	Gly	Ala	Thr	Leu	Ile	Asn	Ala	Thr
				215					220					225

Trp	Leu	Val	Ser	Ala 230	Ala	His	Cys	Phe	Thr 235	Thr	Tyr	Lys	Asn	Pro 240
Ala	Arg	Trp	Thr	Ala 245	Ser	Phe	Gly	Val	Thr 250	Ile	Lys	Pro	Ser	Lys 255
Met	Lys	Arg	Gly	Leu 260	Arg	Arg	Ile	Ile	Val 265	His	Glu	Lys	Tyr	Lys 270
His	Pro	Ser	His	Asp 275	Tyr	Asp	Ile	Ser	Leu 280	Ala	Glu	Leu	Ser	Ser 285
Pro	Val	Pro	Tyr	Thr 290	Asn	Ala	Val	His	Arg 295	Val	Cys	Leu	Pro	Asp 300
Ala	Ser	Tyr	Glu	Phe 305	Gln	Pro	Gly	Asp	Val 310	Met	Phe	Val	Thr	Gly 315
Phe	Gly	Ala	Leu	Lys 320	Asn	Asp	Gly	Tyr	Ser 325	Gln	Asn	His	Leu	Arg 330
Gln	Ala	Gln	Val	Thr 335	Leu	Ile	Asp	Ala	Thr 340	Thr	Cys	Asn	Glu	Pro 345
Gln	Ala	Tyr	Asn	Asp 350	Ala	Ile	Thr	Pro	Arg 355	Met	Leu	Cys	Ala	Gly 360
Ser	Leu	Glu	Gly	Lys 365	Thr	Asp	Ala	Cys	Gln 370	Gly	Asp	Ser	Gly	Gly 375
Pro	Leu	Val	Ser	Ser 380	Asp	Ala	Arg	Asp	Ile 385	Trp	Tyr	Leu	Ala	Gly 390
Ile	Val	Ser	Trp	Gly 395	Asp	Glu	Cys	Ala	Lys 400	Pro	Asn	Lys	Pro	Gly 405
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Thr Gly Ile

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<211> 1170
<212> DNA
<213> Homo sapiens
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<211> 238  
<212> PRT  
<213> Homo sapiens

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35 40 45  
Val Pro Cys Asp Tyr Asp His Cys Arg His Leu Gln Val Pro Cys  
50 55 60  
Lys Glu Leu Gln Arg Val Gly Pro Ala Ala Cys Leu Cys Pro Gly  
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Leu Ser Ser Pro Ala Gln Pro Pro Asp Pro Pro Arg Met Gly Glu  
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Val Arg Ile Ala Ala Glu Glu Gly Arg Ala Val Val His Trp Cys  
95 100 105

Ala Pro Phe Ser Pro Val Leu His Tyr Trp Leu Leu Leu Trp Asp  
110 115 120

Gly Ser Glu Ala Ala Gln Lys Gly Pro Pro Leu Asn Ala Thr Val  
125 130 135

Arg Arg Ala Glu Leu Lys Gly Leu Lys Pro Gly Gly Ile Tyr Val  
140 145 150

Val Cys Val Val Ala Ala Asn Glu Ala Gly Ala Ser Arg Val Pro  
155 160 165

Gln Ala Gly Gly Glu Gly Leu Glu Gly Ala Asp Ile Pro Ala Phe  
170 175 180

Gly Pro Cys Ser Arg Leu Ala Val Pro Pro Asn Pro Arg Thr Leu  
185 190 195

Val His Ala Ala Val Gly Val Gly Thr Ala Leu Ala Leu Leu Ser  
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Cys Pro Arg Arg Ala Ala Ala Arg Ala Ala Gly Ala Leu  
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<210> 272  
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<212> DNA  
<213> Homo sapiens

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<211> 305
<212> PRT
<213> Homo sapiens
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Val	Ser	Ala	Trp	Met	Arg	Asp	Tyr	Leu	Asn	Asn	Val	Leu	Thr	Leu	
				35					40					45	
Thr	Ala	Glu	Thr	Arg	Val	Glu	Glu	Ala	Val	Ile	Leu	Thr	Tyr	Phe	
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Pro	Val	Val	His	Pro	Val	Met	Ile	Ala	Val	Cys	Cys	Phe	Leu	Ile	
				65					70					75	
Ile	Val	Gly	Met	Leu	Gly	Tyr	Cys	Gly	Thr	Val	Lys	Arg	Asn	Leu	
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Leu	Leu	Leu	Ala	Trp	Tyr	Phe	Gly	Ser	Leu	Leu	Val	Ile	Phe	Cys	
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Val	Glu	Leu	Ala	Cys	Gly	Val	Trp	Thr	Tyr	Glu	Gln	Glu	Leu	Met	
				110					115					120	
Val	Pro	Val	Gln	Trp	Ser	Asp	Met	Val	Thr	Leu	Lys	Ala	Arg	Met	
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Thr	Asn	Tyr	Gly	Leu	Pro	Arg	Tyr	Arg	Trp	Leu	Thr	His	Ala	Trp	
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Asn	Phe	Phe	Gln	Arg	Glu	Phe	Lys	Cys	Cys	Gly	Val	Val	Tyr	Phe	
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Thr	Asp	Trp	Leu	Glu	Met	Thr	Glu	Met	Asp	Trp	Pro	Pro	Asp	Ser	

Cys Cys Val Arg	Glu Phe Pro Gly Cys	Ser Lys Gln Ala His	Gln
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Glu Asp Leu Ser	Asp Leu Tyr Gln Glu	Gly Cys Gly Lys Lys	Met
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Tyr Ser Phe Leu	Arg Gly Thr Lys Gln	Leu Gln Val Leu Arg	Phe
215	220	225	
Leu Gly Ile Ser	Ile Gly Val Thr Gln	Ile Leu Ala Met Ile	Leu
230	235	240	
Thr Ile Thr Leu	Leu Trp Ala Leu Tyr	Tyr Asp Arg Arg Glu	Pro
245	250	255	
Gly Thr Asp Gln	Met Met Ser Leu Lys	Asn Asp Asn Ser Gln	His
260	265	270	
Leu Ser Cys Pro	Ser Val Glu Leu Leu	Lys Pro Ser Leu Ser	Arg
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Glu Met Glu Glu	Leu		
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 <212> DNA  
 <213> Homo sapiens

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<210> 275

<211> 432

<212> PRT

<213> Homo sapiens

<400> 275

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Lys	Val	Gly	Ile	Pro	Ile	Ile	Ile	Ala	Leu	Leu	Ser	Leu	Ala	Ser	35	40	45	
Ile	Ile	Ile	Val	Val	Val	Leu	Ile	Lys	Val	Ile	Leu	Asp	Lys	Tyr	50	55	60	
Tyr	Phe	Leu	Cys	Gly	Gln	Pro	Leu	His	Phe	Ile	Pro	Arg	Lys	Gln	65	70	75	
Leu	Cys	Asp	Gly	Glu	Leu	Asp	Cys	Pro	Leu	Gly	Glu	Asp	Glu	Glu	80	85	90	
His	Cys	Val	Lys	Ser	Phe	Pro	Glu	Gly	Pro	Ala	Val	Ala	Val	Arg	95	100	105	
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Gly	Asn	Trp	Phe	Ser	Ala	Cys	Phe	Asp	Asn	Phe	Thr	Glu	Ala	Leu	125	130	135	
Ala	Glu	Thr	Ala	Cys	Arg	Gln	Met	Gly	Tyr	Ser	Arg	Ala	Val	Glu	140	145	150	
Ile	Gly	Pro	Asp	Gln	Asp	Leu	Asp	Val	Val	Glu	Ile	Thr	Glu	Asn	155	160	165	
Ser	Gln	Glu	Leu	Arg	Met	Arg	Asn	Ser	Ser	Gly	Pro	Cys	Leu	Ser	170	175	180	
Gly	Ser	Leu	Val	Ser	Leu	His	Cys	Leu	Ala	Cys	Gly	Lys	Ser	Leu	185	190	195	
Lys	Thr	Pro	Arg	Val	Val	Gly	Gly	Glu	Glu	Ala	Ser	Val	Asp	Ser	200	205	210	
Trp	Pro	Trp	Gln	Val	Ser	Ile	Gln	Tyr	Asp	Lys	Gln	His	Val	Cys	215	220	225	
Gly	Gly	Ser	Ile	Leu	Asp	Pro	His	Trp	Val	Leu	Thr	Ala	Ala	His	230	235	240	
Cys	Phe	Arg	Lys	His	Thr	Asp	Val	Phe	Asn	Trp	Lys	Val	Arg	Ala	245	250	255	





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<210> 277
<211> 761
<212> PRT
<213> Homo sapiens
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Leu	Phe	Leu	Phe	Gln	Leu	Leu	Gln	Leu	Leu	Leu	Pro	Thr	Thr	Thr
				20					25					30
Ala	Gly	Gly	Gly	Gly	Gln	Gly	Pro	Met	Pro	Arg	Val	Arg	Tyr	Tyr
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Ala	Gly	Asp	Glu	Arg	Arg	Ala	Leu	Ser	Phe	Phe	His	Gln	Lys	Gly
				50					55					60
Leu	Gln	Asp	Phe	Asp	Thr	Leu	Leu	Leu	Ser	Gly	Asp	Gly	Asn	Thr
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Leu	Tyr	Val	Gly	Ala	Arg	Glu	Ala	Ile	Leu	Ala	Leu	Asp	Ile	Gln
				80					85					90
Asp	Pro	Gly	Val	Pro	Arg	Leu	Lys	Asn	Met	Ile	Pro	Trp	Pro	Ala
				95					100					105
Ser	Asp	Arg	Lys	Lys	Ser	Glu	Cys	Ala	Phe	Lys	Lys	Lys	Ser	Asn
				110					115					120
Glu	Thr	Gln	Cys	Phe	Asn	Phe	Ile	Arg	Val	Leu	Val	Ser	Tyr	Asn
				125					130					135
Val	Thr	His	Leu	Tyr	Thr	Cys	Gly	Thr	Phe	Ala	Phe	Ser	Pro	Ala
				140					145					150
Cys	Thr	Phe	Ile	Glu	Leu	Gln	Asp	Ser	Tyr	Leu	Leu	Pro	Ile	Ser
				155					160					165
Glu	Asp	Lys	Val	Met	Glu	Gly	Lys	Gly	Gln	Ser	Pro	Phe	Asp	Pro
				170					175					180
Ala	His	Lys	His	Thr	Ala	Val	Leu	Val	Asp	Gly	Met	Leu	Tyr	Ser
				185					190					195
Gly	Thr	Met	Asn	Asn	Phe	Leu	Gly	Ser	Glu	Pro	Ile	Leu	Met	Arg
				200					205					210
Thr	Leu	Gly	Ser	Gln	Pro	Val	Leu	Lys	Thr	Asp	Asn	Phe	Leu	Arg
				215					220					225
Trp	Leu	His	His	Asp	Ala	Ser	Phe	Val	Ala	Ala	Ile	Pro	Ser	Thr
				230					235					240
Gln	Val	Val	Tyr	Phe	Phe	Phe	Glu	Glu	Thr	Ala	Ser	Glu	Phe	Asp
				245					250					255
Phe	Phe	Glu	Arg	Leu	His	Thr	Ser	Arg	Val	Ala	Arg	Val	Cys	Lys
				260					265					270
Asn	Asp	Val	Gly	Gly	Glu	Lys	Leu	Leu	Gln	Lys	Lys	Trp	Thr	Thr
				275					280					285
Phe	Leu	Lys	Ala	Gln	Leu	Leu	Cys	Thr	Gln	Pro	Gly	Gln	Leu	Pro

				290					295					300
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Thr	Ala	Pro	His	Ile 320	Tyr	Ala	Val	Phe	Thr 325	Ser	Gln	Trp	Gln	Val 330
Gly	Gly	Thr	Arg	Ser 335	Ser	Ala	Val	Cys	Ala 340	Phe	Ser	Leu	Leu	Asp 345
Ile	Glu	Arg	Val	Phe 350	Lys	Gly	Lys	Tyr	Lys 355	Glu	Leu	Asn	Lys	Glu 360
Thr	Ser	Arg	Trp	Thr 365	Thr	Tyr	Arg	Gly	Pro 370	Glu	Thr	Asn	Pro	Arg 375
Pro	Gly	Ser	Cys	Ser 380	Val	Gly	Pro	Ser	Ser 385	Asp	Lys	Ala	Leu	Thr 390
Phe	Met	Lys	Asp	His 395	Phe	Leu	Met	Asp	Glu 400	Gln	Val	Val	Gly	Thr 405
Pro	Leu	Leu	Val	Lys 410	Ser	Gly	Val	Glu	Tyr 415	Thr	Arg	Leu	Ala	Val 420
Glu	Thr	Ala	Gln	Gly 425	Leu	Asp	Gly	His	Ser 430	His	Leu	Val	Met	Tyr 435
Leu	Gly	Thr	Thr	Thr 440	Gly	Ser	Leu	His	Lys 445	Ala	Val	Val	Ser	Gly 450
Asp	Ser	Ser	Ala	His 455	Leu	Val	Glu	Glu	Ile 460	Gln	Leu	Phe	Pro	Asp 465
Pro	Glu	Pro	Val	Arg 470	Asn	Leu	Gln	Leu	Ala 475	Pro	Thr	Gln	Gly	Ala 480
Val	Phe	Val	Gly	Phe 485	Ser	Gly	Gly	Val	Trp 490	Arg	Val	Pro	Arg	Ala 495
Asn	Cys	Ser	Val	Tyr 500	Glu	Ser	Cys	Val	Asp 505	Cys	Val	Leu	Ala	Arg 510
Asp	Pro	His	Cys	Ala 515	Trp	Asp	Pro	Glu	Ser 520	Arg	Thr	Cys	Cys	Leu 525
Leu	Ser	Ala	Pro	Asn 530	Leu	Asn	Ser	Trp	Lys 535	Gln	Asp	Met	Glu	Arg 540
Gly	Asn	Pro	Glu	Trp 545	Ala	Cys	Ala	Ser	Gly 550	Pro	Met	Ser	Arg	Ser 555
Leu	Arg	Pro	Gln	Ser 560	Arg	Pro	Gln	Ile	Ile 565	Lys	Glu	Val	Leu	Ala 570
Val	Pro	Asn	Ser	Ile 575	Leu	Glu	Leu	Pro	Cys 580	Pro	His	Leu	Ser	Ala 585

Leu Ala Ser Tyr Tyr Trp Ser His Gly Pro Ala Ala Val Pro Glu  
590 595 600

Ala Ser Ser Thr Val Tyr Asn Gly Ser Leu Leu Leu Ile Val Gln  
605 610 615

Asp Gly Val Gly Gly Leu Tyr Gln Cys Trp Ala Thr Glu Asn Gly  
620 625 630

Phe Ser Tyr Pro Val Ile Ser Tyr Trp Val Asp Ser Gln Asp Gln  
635 640 645

Thr Leu Ala Leu Asp Pro Glu Leu Ala Gly Ile Pro Arg Glu His  
650 655 660

Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly Ala Ala Leu Ala  
665 670 675

Ala Gln Gln Ser Tyr Trp Pro His Phe Val Thr Val Thr Val Leu  
680 685 690

Phe Ala Leu Val Leu Ser Gly Ala Leu Ile Ile Leu Val Ala Ser  
695 700 705

Pro Leu Arg Ala Leu Arg Ala Arg Gly Lys Val Gln Gly Cys Glu  
710 715 720

Thr Leu Arg Pro Gly Glu Lys Ala Pro Leu Ser Arg Glu Gln His  
725 730 735

Leu Gln Ser Pro Lys Glu Cys Arg Thr Ser Ala Ser Asp Val Asp  
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Ala Asp Asn Asn Cys Leu Gly Thr Glu Val Ala  
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<220>  
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<222> 1-24  
<223> Synthetic construct.

<400> 278  
ctgctgggtga aatctggcgt ggag 24

<210> 279  
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<210> 282

<211> 523

<212> PRT

<213> Homo sapiens

<400> 282

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Gly Val Leu Leu Ser Glu Ala Ala Lys Ile Leu Thr Ile Ser Thr
              20              25              30

Val Gly Gly Ser His Tyr Leu Leu Met Asp Arg Val Ser Gln Ile
              35              40              45

Leu Gln Asp His Gly His Asn Val Thr Met Leu Asn His Lys Arg
              50              55              60

Gly Pro Phe Met Pro Asp Phe Lys Lys Glu Glu Lys Ser Tyr Gln
              65              70              75

Val Ile Ser Trp Leu Ala Pro Glu Asp His Gln Arg Glu Phe Lys
              80              85              90

Lys Ser Phe Asp Phe Phe Leu Glu Glu Thr Leu Gly Gly Arg Gly
              95              100             105

Lys Phe Glu Asn Leu Leu Asn Val Leu Glu Tyr Leu Ala Leu Gln
              110             115             120

Cys Ser His Phe Leu Asn Arg Lys Asp Ile Met Asp Ser Leu Lys
              125             130             135

Asn Glu Asn Phe Asp Met Val Ile Val Glu Thr Phe Asp Tyr Cys
              140             145             150

Pro Phe Leu Ile Ala Glu Lys Leu Gly Lys Pro Phe Val Ala Ile
              155             160             165

Leu Ser Thr Ser Phe Gly Ser Leu Glu Phe Gly Leu Pro Ile Pro
              170             175             180

Leu Ser Tyr Val Pro Val Phe Arg Ser Leu Leu Thr Asp His Met
              185             190             195

Asp Phe Trp Gly Arg Val Lys Asn Phe Leu Met Phe Phe Ser Phe
              200             205             210

Cys Arg Arg Gln Gln His Met Gln Ser Thr Phe Asp Asn Thr Ile
              215             220             225

Lys Glu His Phe Thr Glu Gly Ser Arg Pro Val Leu Ser His Leu
              230             235             240

Leu Leu Lys Ala Glu Leu Trp Phe Ile Asn Ser Asp Phe Ala Phe
              245             250             255

Asp Phe Ala Arg Pro Leu Leu Pro Asn Thr Val Tyr Val Gly Gly

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<210> 283  
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<220>  
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 <222> 1-24  
 <223> Synthetic construct.

<400> 283  
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<210> 284  
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 <222> 1-24  
 <223> Synthetic construct.

<400> 284  
 tcaggctggg ctccaaagag aggg 24

<210> 285  
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<210> 286  
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 <212> DNA  
 <213> Homo sapiens

<400> 286  
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 ccagggagag gagcggaaac agaagagggg cagaagaccg gggcacttgt 450

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<210> 287

<211> 205

<212> PRT

<213> Homo sapiens

<400> 287

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				20					25					30
Trp	Ala	Gln	Glu	Gly	Ser	Glu	Pro	Val	Leu	Leu	Glu	Gly	Glu	Cys
				35					40					45
Leu	Val	Val	Cys	Glu	Pro	Gly	Arg	Ala	Ala	Ala	Gly	Gly	Pro	Gly
				50					55					60
Gly	Ala	Ala	Leu	Gly	Glu	Ala	Pro	Pro	Gly	Arg	Val	Ala	Phe	Ala
				65					70					75
Ala	Val	Arg	Ser	His	His	His	Glu	Pro	Ala	Gly	Glu	Thr	Gly	Asn
				80					85					90
Gly	Thr	Ser	Gly	Ala	Ile	Tyr	Phe	Asp	Gln	Val	Leu	Val	Asn	Glu
				95					100					105
Gly	Gly	Gly	Phe	Asp	Arg	Ala	Ser	Gly	Ser	Phe	Val	Ala	Pro	Val
				110					115					120
Arg	Gly	Val	Tyr	Ser	Phe	Arg	Phe	His	Val	Val	Lys	Val	Tyr	Asn
				125					130					135
Arg	Gln	Thr	Val	Gln	Val	Ser	Leu	Met	Leu	Asn	Thr	Trp	Pro	Val
				140					145					150
Ile	Ser	Ala	Phe	Ala	Asn	Asp	Pro	Asp	Val	Thr	Arg	Glu	Ala	Ala
				155					160					165
Thr	Ser	Ser	Val	Leu	Leu	Pro	Leu	Asp	Pro	Gly	Asp	Arg	Val	Ser



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<210> 292  
 <211> 388  
 <212> PRT  
 <213> Homo sapiens

<400> 292  
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 35 40 45  
 Ile Leu Ser Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asn  
 50 55 60  
 Arg Ser Lys Val Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln  
 65 70 75  
 Trp Val Leu Ser Phe Leu Val Leu Gly Val Ala Cys Ser Ala Ile  
 80 85 90  
 Leu Met Tyr Ile Phe Cys Thr Asp Cys Trp Leu Ile Ala Val Leu  
 95 100 105  
 Tyr Phe Thr Trp Leu Val Phe Asp Trp Asn Thr Pro Lys Lys Gly  
 110 115 120  
 Gly Arg Arg Ser Gln Trp Val Arg Asn Trp Ala Val Trp Arg Tyr  
 125 130 135  
 Phe Arg Asp Tyr Phe Pro Ile Gln Leu Val Lys Thr His Asn Leu  
 140 145 150  
 Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr His Pro His Gly Ile  
 155 160 165  
 Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr Glu Ala Thr Glu  
 170 175 180  
 Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu Ala Thr Leu  
 185 190 195  
 Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu Met Ser  
 200 205 210  
 Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu Leu  
 215 220 225  
 Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Ile Val Val Gly Gly  
 230 235 240  
 Ala Ala Glu Ser Leu Ser Ser Met Pro Gly Lys Asn Ala Val Thr  
 245 250 255  
 Leu Arg Asn Arg Lys Gly Phe Val Lys Leu Ala Leu Arg His Gly

260	265	270
Ala Asp Leu Val Pro Ile Tyr Ser Phe	Gly Glu Asn Glu Val Tyr	
275	280	285
Lys Gln Val Ile Phe Glu Glu Gly Ser	Trp Gly Arg Trp Val Gln	
290	295	300
Lys Lys Phe Gln Lys Tyr Ile Gly Phe	Ala Pro Cys Ile Phe His	
305	310	315
Gly Arg Gly Leu Phe Ser Ser Asp Thr	Trp Gly Leu Val Pro Tyr	
320	325	330
Ser Lys Pro Ile Thr Thr Val Val Gly	Glu Pro Ile Thr Ile Pro	
335	340	345
Lys Leu Glu His Pro Thr Gln Gln Asp	Ile Asp Leu Tyr His Thr	
350	355	360
Met Tyr Met Glu Ala Leu Val Lys Leu	Phe Asp Lys His Lys Thr	
365	370	375
Lys Phe Gly Leu Pro Glu Thr Glu Val	Leu Glu Val Asn	
380	385	

<210> 293  
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 <222> 1-24  
 <223> Synthetic construct.

<400> 293  
 gctgacctgg ttcccatcta ctcc 24

<210> 294  
 <211> 24  
 <212> DNA  
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<220>  
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 <222> 1-24  
 <223> Synthetic construct.

<400> 294  
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<210> 295  
 <211> 50  
 <212> DNA  
 <213> Artificial

<220>



<221> Artificial Sequence  
 <222> 1-50  
 <223> Synthetic construct.

<400> 295  
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<210> 296  
 <211> 3060  
 <212> DNA  
 <213> Homo sapiens

<400> 296  
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<210> 297  
 <211> 368  
 <212> PRT  
 <213> Homo sapiens

<400> 297  
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 Val Gln Leu Cys Thr Leu Ala Leu Trp Pro Val Ser Lys Gln Leu  
 35 40 45  
 Tyr Arg Arg Leu Asn Cys Arg Leu Ala Tyr Ser Leu Trp Ser Gln  
 50 55 60  
 Leu Val Met Leu Leu Glu Trp Trp Ser Cys Thr Glu Cys Thr Leu  
 65 70 75  
 Phe Thr Asp Gln Ala Thr Val Glu Arg Phe Gly Lys Glu His Ala  
 80 85 90  
 Val Ile Ile Leu Asn His Asn Phe Glu Ile Asp Phe Leu Cys Gly  
 95 100 105  
 Trp Thr Met Cys Glu Arg Phe Gly Val Leu Gly Ser Ser Lys Val  
 110 115 120  
 Leu Ala Lys Lys Glu Leu Leu Tyr Val Pro Leu Ile Gly Trp Thr  
 125 130 135  
 Trp Tyr Phe Leu Glu Ile Val Phe Cys Lys Arg Lys Trp Glu Glu  
 140 145 150  
 Asp Arg Asp Thr Val Val Glu Gly Leu Arg Arg Leu Ser Asp Tyr  
 155 160 165

Pro	Glu	Tyr	Met	Trp 170	Phe	Leu	Leu	Tyr	Cys 175	Glu	Gly	Thr	Arg	Phe 180
Thr	Glu	Thr	Lys	His 185	Arg	Val	Ser	Met	Glu 190	Val	Ala	Ala	Ala	Lys 195
Gly	Leu	Pro	Val	Leu 200	Lys	Tyr	His	Leu	Leu 205	Pro	Arg	Thr	Lys	Gly 210
Phe	Thr	Thr	Ala	Val 215	Lys	Cys	Leu	Arg	Gly 220	Thr	Val	Ala	Ala	Val 225
Tyr	Asp	Val	Thr	Leu 230	Asn	Phe	Arg	Gly	Asn 235	Lys	Asn	Pro	Ser	Leu 240
Leu	Gly	Ile	Leu	Tyr 245	Gly	Lys	Lys	Tyr	Glu 250	Ala	Asp	Met	Cys	Val 255
Arg	Arg	Phe	Pro	Leu 260	Glu	Asp	Ile	Pro	Leu 265	Asp	Glu	Lys	Glu	Ala 270
Ala	Gln	Trp	Leu	His 275	Lys	Leu	Tyr	Gln	Glu 280	Lys	Asp	Ala	Leu	Gln 285
Glu	Ile	Tyr	Asn	Gln 290	Lys	Gly	Met	Phe	Pro 295	Gly	Glu	Gln	Phe	Lys 300
Pro	Ala	Arg	Arg	Pro 305	Trp	Thr	Leu	Leu	Asn 310	Phe	Leu	Ser	Trp	Ala 315
Thr	Ile	Leu	Leu	Ser 320	Pro	Leu	Phe	Ser	Phe 325	Val	Leu	Gly	Val	Phe 330
Ala	Ser	Gly	Ser	Pro 335	Leu	Leu	Ile	Leu	Thr 340	Phe	Leu	Gly	Phe	Val 345
Gly	Ala	Ala	Ser	Phe 350	Gly	Val	Arg	Arg	Leu 355	Ile	Gly	Glu	Ser	Leu 360
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<210> 298
<211> 24
<212> DNA
<213> Artificial
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<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.
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<400> 298
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<210>	299
<211>	21
<212>	DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-21

<223> Synthetic construct.

<400> 299

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<210> 300

<211> 45

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-45

<223> Synthetic construct.

<400> 300

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<210> 301

<211> 1334

<212> DNA

<213> Homo sapiens

<400> 301

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tcagtttgtc ttgtgggggt ggtggcaggc aggccggctt acgcctgata 200  
cggccctggg ttagaaggga aggaagata aacttttata caaatgggga 250  
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<210> 302
<211> 143
<212> PRT
<213> Homo sapiens
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<400> 302														
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				20					25					30
Leu	Leu	Ile	Ser	Leu	Val	Gly	Lys	Gly	Leu	Ser	Leu	Ser	Cys	Gly
				35					40					45
Val	Gly	Gly	Arg	Gln	Ala	Gly	Leu	Arg	Leu	Ile	Arg	Pro	Trp	Val
				50					55					60
Arg	Arg	Glu	Gly	Lys	Ile	Asn	Phe	Tyr	Thr	Asn	Gly	Asp	Ser	Trp
				65					70					75
Gly	Leu	Arg	Pro	Ala	Ser	Ser	Val	Lys	Phe	Leu	Gly	Ser	Ala	Tyr
				80					85					90
Thr	Phe	Phe	Ser	Leu	Thr	Trp	His	Thr	Leu	Leu	Lys	Ala	Ser	Gln
				95					100					105
Gly	Phe	Ser	Leu	Phe	Leu	Gly	Ser	Lys	Tyr	Leu	Glu	Leu	Gln	Glu
				110					115					120
Pro	Ser	Trp	Ser	Gly	Pro	Cys	Pro	Pro	Gly	Gln	Leu	His	Cys	Thr
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Cys	Gly	Val	Leu	Leu	Ser	Phe	Leu							

140

<210> 303  
 <211> 1768  
 <212> DNA  
 <213> Homo sapiens

<400> 303  
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<210> 304  
<211> 109  
<212> PRT  
<213> Homo sapiens

<400> 304  
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20 25 30  
Asp Leu Ser Leu Trp Leu Trp Pro Lys Pro Asp Leu His Ser Gly  
35 40 45  
Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly  
50 55 60  
Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro  
65 70 75  
Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala  
80 85 90  
Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly  
95 100 105  
Arg Arg Arg Asp

<210> 305  
<211> 989  
<212> DNA  
<213> Homo sapiens

<400> 305



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<210> 306  
 <211> 262  
 <212> PRT  
 <213> Homo sapiens

<400> 306  
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 35 40 45  
 Leu Leu Pro Pro Glu Asp Ser Arg Leu Trp Gln Tyr Leu Leu Ser  
 50 55 60

Arg Ser Met Arg Glu His Pro Ala Leu Arg Ser Leu Arg Leu Leu  
65 70 75

Thr Leu Glu Gln Pro Gln Gly Asp Ser Met Met Thr Cys Glu Gln  
80 85 90

Ala Gln Leu Leu Ala Asn Leu Ala Arg Leu Ile Gln Ala Lys Lys  
95 100 105

Ala Leu Asp Leu Gly Thr Phe Thr Gly Tyr Ser Ala Leu Ala Leu  
110 115 120

Ala Leu Ala Leu Pro Ala Asp Gly Arg Val Val Thr Cys Glu Val  
125 130 135

Asp Ala Gln Pro Pro Glu Leu Gly Arg Pro Leu Trp Arg Gln Ala  
140 145 150

Glu Ala Glu His Lys Ile Asp Leu Arg Leu Lys Pro Ala Leu Glu  
155 160 165

Thr Leu Asp Glu Leu Leu Ala Ala Gly Glu Ala Gly Thr Phe Asp  
170 175 180

Val Ala Val Val Asp Ala Asp Lys Glu Asn Cys Ser Ala Tyr Tyr  
185 190 195

Glu Arg Cys Leu Gln Leu Leu Arg Pro Gly Gly Ile Leu Ala Val  
200 205 210

Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln Pro Pro Lys Gly  
215 220 225

Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu Arg Ile Arg  
230 235 240

Arg Asp Val Arg Val Tyr Ile Ser Leu Leu Pro Leu Gly Asp Gly  
245 250 255

Leu Thr Leu Ala Phe Lys Ile  
260

<210> 307  
<211> 2272  
<212> DNA  
<213> Homo sapiens

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gcacacacga aacagccttc ctgggaccca aggacctgtt cccctacgac 250

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ctccagaaga	acacagacgt	ggtggccacc	ttgaagaaga	ttcgccgtta	1650
caaagcgaac	aaggacgtaa	tggagaagqc	aqcagaagtc	tatacccqqc	1700

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gcagagcaga gaactgtggg gaacgctgtg ctgtttgtat ttgttcctt 2200  
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<210> 308  
<211> 671  
<212> PRT  
<213> Homo sapiens

<400> 308  
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20 25 30  
Gly Ala Val Lys Pro Pro Pro Asn Lys Tyr Pro Ile Phe Phe Phe  
35 40 45  
Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro  
50 55 60  
Tyr Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys  
65 70 75  
Gly Phe Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala  
80 85 90  
Ser Tyr Ser Ala Pro Pro Pro Val Ser Ser Ser Asp Ser Glu Ala  
95 100 105  
Pro Glu Ala Asn Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp  
110 115 120  
Glu Asp Arg Gly Val Met Ala Val Thr Ala Val Thr Ala Thr Ala  
125 130 135  
Ala Ser Asp Arg Met Glu Ser Asp Ser Asp Ser Asp Lys Ser Ser

Asp Asn Ser Gly	Leu Lys Arg Lys Thr	Pro Ala Leu Lys Met	Ser
155		160	165
Val Ser Lys Arg	Ala Arg Lys Ala Ser	Ser Asp Leu Asp Gln	Ala
170		175	180
Ser Val Ser Pro	Ser Glu Glu Glu Asn	Ser Glu Ser Ser Ser	Glu
185		190	195
Ser Glu Lys Thr	Ser Asp Gln Asp Phe	Thr Pro Glu Lys Lys	Ala
200		205	210
Ala Val Arg Ala	Pro Arg Arg Gly Pro	Leu Gly Gly Arg Lys	Lys
215		220	225
Lys Lys Ala Pro	Ser Ala Ser Asp Ser	Asp Ser Lys Ala Asp	Ser
230		235	240
Asp Gly Ala Lys	Pro Glu Pro Val Ala	Met Ala Arg Ser Ala	Ser
245		250	255
Ser Ser Ser Ser	Ser Ser Ser Ser Ser	Asp Ser Asp Val Ser	Val
260		265	270
Lys Lys Pro Pro	Arg Gly Arg Lys Pro	Ala Glu Lys Pro Leu	Pro
275		280	285
Lys Pro Arg Gly	Arg Lys Pro Lys Pro	Glu Arg Pro Pro Ser	Ser
290		295	300
Ser Ser Ser Asp	Ser Asp Ser Asp Glu	Val Asp Arg Ile Ser	Glu
305		310	315
Trp Lys Arg Arg	Asp Glu Ala Arg Arg	Arg Glu Leu Glu Ala	Arg
320		325	330
Arg Arg Arg Glu	Gln Glu Glu Glu Leu	Arg Arg Leu Arg Glu	Gln
335		340	345
Glu Lys Glu Glu	Lys Glu Arg Arg Arg	Glu Arg Ala Asp Arg	Gly
350		355	360
Glu Ala Glu Arg	Gly Ser Gly Gly Ser	Ser Gly Asp Glu Leu	Arg
365		370	375
Glu Asp Asp Glu	Pro Val Lys Lys Arg	Gly Arg Lys Gly Arg	Gly
380		385	390
Arg Gly Pro Pro	Ser Ser Ser Asp Ser	Glu Pro Glu Ala Glu	Leu
395		400	405
Glu Arg Glu Ala	Lys Lys Ser Ala Lys	Lys Pro Gln Ser Ser	Ser
410		415	420
Thr Glu Pro Ala	Arg Lys Pro Gly Gln	Lys Glu Lys Arg Val	Arg
425		430	435

Pro	Glu	Glu	Lys	Gln 440	Gln	Ala	Lys	Pro	Val 445	Lys	Val	Glu	Arg	Thr 450
Arg	Lys	Arg	Ser	Glu 455	Gly	Phe	Ser	Met	Asp 460	Arg	Lys	Val	Glu	Lys 465
Lys	Lys	Glu	Pro	Ser 470	Val	Glu	Glu	Lys	Leu 475	Gln	Lys	Leu	His	Ser 480
Glu	Ile	Lys	Phe	Ala 485	Leu	Lys	Val	Asp	Ser 490	Pro	Asp	Val	Lys	Arg 495
Cys	Leu	Asn	Ala	Leu 500	Glu	Glu	Leu	Gly	Thr 505	Leu	Gln	Val	Thr	Ser 510
Gln	Ile	Leu	Gln	Lys 515	Asn	Thr	Asp	Val	Val 520	Ala	Thr	Leu	Lys	Lys 525
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Glu	Ala	Val	Gln	Lys 560	Val	Asn	Lys	Ala	Gly 565	Met	Glu	Lys	Glu	Lys 570
Ala	Glu	Glu	Lys	Leu 575	Ala	Gly	Glu	Glu	Leu 580	Ala	Gly	Glu	Glu	Ala 585
Pro	Gln	Glu	Lys	Ala 590	Glu	Asp	Lys	Pro	Ser 595	Thr	Asp	Leu	Ser	Ala 600
Pro	Val	Asn	Gly	Glu 605	Ala	Thr	Ser	Gln	Lys 610	Gly	Glu	Ser	Ala	Glu 615
Asp	Lys	Glu	His	Glu 620	Glu	Gly	Arg	Asp	Ser 625	Glu	Glu	Gly	Pro	Arg 630
Cys	Gly	Ser	Ser	Glu 635	Asp	Leu	His	Asp	Ser 640	Val	Arg	Glu	Gly	Pro 645
Asp	Leu	Asp	Arg	Pro 650	Gly	Ser	Asp	Arg	Gln 655	Glu	Arg	Glu	Arg	Ala 660
Arg	Gly	Asp	Ser	Glu 665	Ala	Leu	Asp	Glu	Glu 670	Ser				

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<210> 309
<211> 3871
<212> DNA
<213> Homo sapiens
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 tacaaagact tgctgctttc aaatagctgt attccctttt tgggttcac 300  
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 ggagcatttc atccaatatg tgggtatatt gatcttgag tctacaagga 600  
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<210> 310
<211> 777
<212> PRT
<213> Homo sapiens
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Phe Leu Pro Val Thr Gly Thr Leu Lys Gln Asn Ile Pro Arg Leu
      35     40     45
Lys Leu Thr Tyr Lys Asp Leu Leu Leu Ser Asn Ser Cys Ile Pro
      50     55     60
Phe Leu Gly Ser Ser Glu Gly Leu Asp Phe Gln Thr Leu Leu Leu
      65     70     75
Asp Glu Glu Arg Gly Arg Leu Leu Leu Gly Ala Lys Asp His Ile

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80					85					90				
Phe	Leu	Leu	Ser	Leu	Val	Asp	Leu	Asn	Lys	Asn	Phe	Lys	Lys	Ile
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Tyr	Trp	Pro	Ala	Ala	Lys	Glu	Arg	Val	Glu	Leu	Cys	Lys	Leu	Ala
				110					115					120
Gly	Lys	Asp	Ala	Asn	Thr	Glu	Cys	Ala	Asn	Phe	Ile	Arg	Val	Leu
				125					130					135
Gln	Pro	Tyr	Asn	Lys	Thr	His	Ile	Tyr	Val	Cys	Gly	Thr	Gly	Ala
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Phe	His	Pro	Ile	Cys	Gly	Tyr	Ile	Asp	Leu	Gly	Val	Tyr	Lys	Glu
				155					160					165
Asp	Ile	Ile	Phe	Lys	Leu	Asp	Thr	His	Asn	Leu	Glu	Ser	Gly	Arg
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Leu	Lys	Cys	Pro	Phe	Asp	Pro	Gln	Gln	Pro	Phe	Ala	Ser	Val	Met
				185					190					195
Thr	Asp	Glu	Tyr	Leu	Tyr	Ser	Gly	Thr	Ala	Ser	Asp	Phe	Leu	Gly
				200					205					210
Lys	Asp	Thr	Ala	Phe	Thr	Arg	Ser	Leu	Gly	Pro	Thr	His	Asp	His
				215					220					225
His	Tyr	Ile	Arg	Thr	Asp	Ile	Ser	Glu	His	Tyr	Trp	Leu	Asn	Gly
				230					235					240
Ala	Lys	Phe	Ile	Gly	Thr	Phe	Phe	Ile	Pro	Asp	Thr	Tyr	Asn	Pro
				245					250					255
Asp	Asp	Asp	Lys	Ile	Tyr	Phe	Phe	Phe	Arg	Glu	Ser	Ser	Gln	Glu
				260					265					270
Gly	Ser	Thr	Ser	Asp	Lys	Thr	Ile	Leu	Ser	Arg	Val	Gly	Arg	Val
				275					280					285
Cys	Lys	Asn	Asp	Val	Gly	Gly	Gln	Arg	Ser	Leu	Ile	Asn	Lys	Trp
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Thr	Thr	Phe	Leu	Lys	Ala	Arg	Leu	Ile	Cys	Ser	Ile	Pro	Gly	Ser
				305					310					315
Asp	Gly	Ala	Asp	Thr	Tyr	Phe	Asp	Glu	Leu	Gln	Asp	Ile	Tyr	Leu
				320					325					330
Leu	Pro	Thr	Arg	Asp	Glu	Arg	Asn	Pro	Val	Val	Tyr	Gly	Val	Phe
				335					340					345
Thr	Thr	Thr	Ser	Ser	Ile	Phe	Lys	Gly	Ser	Ala	Val	Cys	Val	Tyr
				350					355					360
Ser	Met	Ala	Asp	Ile	Arg	Ala	Val	Phe	Asn	Gly	Pro	Tyr	Ala	His
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Lys	Glu	Ser	Ala	Asp 380	His	Arg	Trp	Val	Gln 385	Tyr	Asp	Gly	Arg	Ile 390
Pro	Tyr	Pro	Arg	Pro 395	Gly	Thr	Cys	Pro	Ser 400	Lys	Thr	Tyr	Asp	Pro 405
Leu	Ile	Lys	Ser	Thr 410	Arg	Asp	Phe	Pro	Asp 415	Asp	Val	Ile	Ser	Phe 420
Ile	Lys	Arg	His	Ser 425	Val	Met	Tyr	Lys	Ser 430	Val	Tyr	Pro	Val	Ala 435
Gly	Gly	Pro	Thr	Phe 440	Lys	Arg	Ile	Asn	Val 445	Asp	Tyr	Arg	Leu	Thr 450
Gln	Ile	Val	Val	Asp 455	His	Val	Ile	Ala	Glu 460	Asp	Gly	Gln	Tyr	Asp 465
Val	Met	Phe	Leu	Gly 470	Thr	Asp	Ile	Gly	Thr 475	Val	Leu	Lys	Val	Val 480
Ser	Ile	Ser	Lys	Glu 485	Lys	Trp	Asn	Met	Glu 490	Glu	Val	Val	Leu	Glu 495
Glu	Leu	Gln	Ile	Phe 500	Lys	His	Ser	Ser	Ile 505	Ile	Leu	Asn	Met	Glu 510
Leu	Ser	Leu	Lys	Gln 515	Gln	Gln	Leu	Tyr	Ile 520	Gly	Ser	Arg	Asp	Gly 525
Leu	Val	Gln	Leu	Ser 530	Leu	His	Arg	Cys	Asp 535	Thr	Tyr	Gly	Lys	Ala 540
Cys	Ala	Asp	Cys	Cys 545	Leu	Ala	Arg	Asp	Pro 550	Tyr	Cys	Ala	Trp	Asp 555
Gly	Asn	Ala	Cys	Ser 560	Arg	Tyr	Ala	Pro	Thr 565	Ser	Lys	Arg	Arg	Ala 570
Arg	Arg	Gln	Asp	Val 575	Lys	Tyr	Gly	Asp	Pro 580	Ile	Thr	Gln	Cys	Trp 585
Asp	Ile	Glu	Asp	Ser 590	Ile	Ser	His	Glu	Thr 595	Ala	Asp	Glu	Lys	Val 600
Ile	Phe	Gly	Ile	Glu 605	Phe	Asn	Ser	Thr	Phe 610	Leu	Glu	Cys	Ile	Pro 615
Lys	Ser	Gln	Gln	Ala 620	Thr	Ile	Lys	Trp	Tyr 625	Ile	Gln	Arg	Ser	Gly 630
Asp	Glu	His	Arg	Glu 635	Glu	Leu	Lys	Pro	Asp 640	Glu	Arg	Ile	Ile	Lys 645
Thr	Glu	Tyr	Gly	Leu 650	Leu	Ile	Arg	Ser	Leu 655	Gln	Lys	Lys	Asp	Ser 660
Gly	Met	Tyr	Tyr	Cys	Lys	Ala	Gln	Glu	His	Thr	Phe	Ile	His	Thr

	665		670		675
Ile Val Lys Leu Thr Leu Asn Val Ile	Glu Asn Glu Gln Met Glu				
680	685				690
Asn Thr Gln Arg Ala Glu His Glu Glu	Gly Gln Val Lys Asp Leu				
695	700				705
Leu Ala Glu Ser Arg Leu Arg Tyr Lys	Asp Tyr Ile Gln Ile Leu				
710	715				720
Ser Ser Pro Asn Phe Ser Leu Asp Gln	Tyr Cys Glu Gln Met Trp				
725	730				735
His Arg Glu Lys Arg Arg Gln Arg Asn	Lys Gly Gly Pro Lys Trp				
740	745				750
Lys His Met Gln Glu Met Lys Lys Lys	Arg Asn Arg Arg His His				
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Arg Asp Leu Asp Glu Leu Pro Arg Ala	Val Ala Thr				
770	775				

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 <213> Artificial

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<210> 312  
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 <212> DNA  
 <213> Artificial

<220>  
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 <223> Synthetic construct.

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<210> 313  
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<210> 314  
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<212> DNA  
<213> Homo sapiens

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 gctaaagccc cggatcctgg ccaccagat cccctcacct gaaggccagg 1750  
 gaagccttga ccccagtgat tgctgctgtc cctatcttca agctgtcaga 1800  
 ccacaccatc aatgatccag agcaacacag ccaaaagctg gaatcgccct 1850  
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 gagctggaac ccaactcttt ttttccatt gttctatcat ctctaggacc 1950  
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 gagcaataag agcccagccc agtgcagtcc cggtgtgttt ttcctacctg 2950  
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<210> 315  
 <211> 370  
 <212> PRT  
 <213> Homo sapiens

<400> 315  
 Met Gln Leu Ala Lys Tyr Gln Ser His Ser Lys Ser Cys Pro Thr  
 1 5 10 15

Val Phe Pro Pro Thr Pro Val Leu Cys Leu Pro Asn Gln Val Leu  
20 25 30

Gln Arg Leu Glu Gln Arg Arg Gln Gln Ala Ser Glu Arg Glu Ala  
35 40 45

Pro Ser Ile Glu Gln Arg Leu Gln Glu Val Arg Glu Ser Ile Arg  
50 55 60

Arg Ala Gln Val Ser Gln Val Lys Gly Ala Ala Arg Leu Ala Leu  
65 70 75

Leu Gln Gly Ala Gly Leu Asp Val Glu Arg Trp Leu Lys Pro Ala  
80 85 90

Met Thr Gln Ala Gln Asp Glu Val Glu Gln Glu Arg Arg Leu Ser  
95 100 105

Glu Ala Arg Leu Ser Gln Arg Asp Leu Ser Pro Thr Ala Glu Asp  
110 115 120

Ala Glu Leu Ser Asp Phe Glu Glu Cys Glu Glu Thr Gly Glu Leu  
125 130 135

Phe Glu Glu Pro Ala Pro Gln Ala Leu Ala Thr Arg Ala Leu Pro  
140 145 150

Cys Pro Ala His Val Val Phe Arg Tyr Gln Ala Gly Arg Glu Asp  
155 160 165

Glu Leu Thr Ile Thr Glu Gly Glu Trp Leu Glu Val Ile Glu Glu  
170 175 180

Gly Asp Ala Asp Glu Trp Val Lys Ala Arg Asn Gln His Gly Glu  
185 190 195

Val Gly Phe Val Pro Glu Arg Tyr Leu Asn Phe Pro Asp Leu Ser  
200 205 210

Leu Pro Glu Ser Ser Gln Asp Ser Asp Asn Pro Cys Gly Ala Glu  
215 220 225

Pro Thr Ala Phe Leu Ala Gln Ala Leu Tyr Ser Tyr Thr Gly Gln  
230 235 240

Ser Ala Glu Glu Leu Ser Phe Pro Glu Gly Ala Leu Ile Arg Leu  
245 250 255

Leu Pro Arg Ala Gln Asp Gly Val Asp Asp Gly Phe Trp Arg Gly  
260 265 270

Glu Phe Gly Gly Arg Val Gly Val Phe Pro Ser Leu Leu Val Glu  
275 280 285

Glu Leu Leu Gly Pro Pro Gly Pro Pro Glu Leu Ser Asp Pro Glu  
290 295 300

Gln Met Leu Pro Ser Pro Ser Pro Pro Ser Phe Ser Pro Pro Ala



305	310	315
Pro Thr Ser Val	Leu Asp Gly Pro Pro	Ala Pro Val Leu Pro Gly
320	325	330
Asp Lys Ala Leu	Asp Phe Pro Gly Phe	Leu Asp Met Met Ala Pro
335	340	345
Arg Leu Arg Pro	Met Arg Pro Pro Pro	Pro Pro Pro Ala Lys Ala
350	355	360
Pro Asp Pro Gly	His Pro Asp Pro Leu Thr	
365	370	

<210> 316  
 <211> 4407  
 <212> DNA  
 <213> Homo sapiens

<400> 316  
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 aagcggccca gacagagtcc tacagaggga gaggccagag aagctgcaga 150  
 agacacaggc agggagagac aaagatccag gaaaggagggg ctcaggagga 200  
 gagtttggag aagccagacc cctgggcacc tctcccaagc ccaaggacta 250  
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aacgtcaagg ctccctcttg aagccccagc ccagagcccc gaagagccaa 1050  
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aaggaaa 4407

<210> 317  
<211> 837  
<212> PRT  
<213> Homo sapiens

<400> 317  
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Leu Ser Trp Leu Val Trp Leu Leu Leu Leu Leu Ala Ser Leu  
35 40 45  
Leu Pro Ser Ala Arg Leu Ala Ser Pro Leu Pro Arg Glu Glu Glu  
50 55 60  
Ile Val Phe Pro Glu Lys Leu Asn Gly Ser Val Leu Pro Gly Ser  
65 70 75  
Gly Ala Pro Ala Arg Leu Leu Cys Arg Leu Gln Ala Phe Gly Glu  
80 85 90  
Thr Leu Leu Leu Glu Leu Glu Gln Asp Ser Gly Val Gln Val Glu  
95 100 105  
Gly Leu Thr Val Gln Tyr Leu Gly Gln Ala Pro Glu Leu Leu Gly  
110 115 120  
Gly Ala Glu Pro Gly Thr Tyr Leu Thr Gly Thr Ile Asn Gly Asp  
125 130 135  
Pro Glu Ser Val Ala Ser Leu His Trp Asp Gly Gly Ala Leu Leu

				140					145					150
Gly	Val	Leu	Gln	Tyr 155	Arg	Gly	Ala	Glu	Leu 160	His	Leu	Gln	Pro	Leu 165
Glu	Gly	Gly	Thr	Pro 170	Asn	Ser	Ala	Gly	Gly 175	Pro	Gly	Ala	His	Ile 180
Leu	Arg	Arg	Lys	Ser 185	Pro	Ala	Ser	Gly	Gln 190	Gly	Pro	Met	Cys	Asn 195
Val	Lys	Ala	Pro	Leu 200	Gly	Ser	Pro	Ser	Pro 205	Arg	Pro	Arg	Arg	Ala 210
Lys	Arg	Phe	Ala	Ser 215	Leu	Ser	Arg	Phe	Val 220	Glu	Thr	Leu	Val	Val 225
Ala	Asp	Asp	Lys	Met 230	Ala	Ala	Phe	His	Gly 235	Ala	Gly	Leu	Lys	Arg 240
Tyr	Leu	Leu	Thr	Val 245	Met	Ala	Ala	Ala	Ala 250	Lys	Ala	Phe	Lys	His 255
Pro	Ser	Ile	Arg	Asn 260	Pro	Val	Ser	Leu	Val 265	Val	Thr	Arg	Leu	Val 270
Ile	Leu	Gly	Ser	Gly 275	Glu	Glu	Gly	Pro	Gln 280	Val	Gly	Pro	Ser	Ala 285
Ala	Gln	Thr	Leu	Arg 290	Ser	Phe	Cys	Ala	Trp 295	Gln	Arg	Gly	Leu	Asn 300
Thr	Pro	Glu	Asp	Ser 305	Gly	Pro	Asp	His	Phe 310	Asp	Thr	Ala	Ile	Leu 315
Phe	Thr	Arg	Gln	Asp 320	Leu	Cys	Gly	Val	Ser 325	Thr	Cys	Asp	Thr	Leu 330
Gly	Met	Ala	Asp	Val 335	Gly	Thr	Val	Cys	Asp 340	Pro	Ala	Arg	Ser	Cys 345
Ala	Ile	Val	Glu	Asp 350	Asp	Gly	Leu	Gln	Ser 355	Ala	Phe	Thr	Ala	Ala 360
His	Glu	Leu	Gly	His 365	Val	Phe	Asn	Met	Leu 370	His	Asp	Asn	Ser	Lys 375
Pro	Cys	Ile	Ser	Leu 380	Asn	Gly	Pro	Leu	Ser 385	Thr	Ser	Arg	His	Val 390
Met	Ala	Pro	Val	Met 395	Ala	His	Val	Asp	Pro 400	Glu	Glu	Pro	Trp	Ser 405
Pro	Cys	Ser	Ala	Arg 410	Phe	Ile	Thr	Asp	Phe 415	Leu	Asp	Asn	Gly	Tyr 420
Gly	His	Cys	Leu	Leu 425	Asp	Lys	Pro	Glu	Ala 430	Pro	Leu	His	Leu	Pro 435

Val Thr Phe Pro	Gly Lys Asp Tyr Asp	Ala Asp Arg Gln Cys Gln	440	445	450
Leu Thr Phe Gly	Pro Asp Ser Arg His	Cys Pro Gln Leu Pro Pro	455	460	465
Pro Cys Ala Ala	Leu Trp Cys Ser Gly	His Leu Asn Gly His Ala	470	475	480
Met Cys Gln Thr	Lys His Ser Pro Trp	Ala Asp Gly Thr Pro Cys	485	490	495
Gly Pro Ala Gln	Ala Cys Met Gly Gly	Arg Cys Leu His Met Asp	500	505	510
Gln Leu Gln Asp	Phe Asn Ile Pro Gln	Ala Gly Gly Trp Gly Pro	515	520	525
Trp Gly Pro Trp	Gly Asp Cys Ser Arg	Thr Cys Gly Gly Gly Val	530	535	540
Gln Phe Ser Ser	Arg Asp Cys Thr Arg	Pro Val Pro Arg Asn Gly	545	550	555
Gly Lys Tyr Cys	Glu Gly Arg Arg Thr	Arg Phe Arg Ser Cys Asn	560	565	570
Thr Glu Asp Cys	Pro Thr Gly Ser Ala	Leu Thr Phe Arg Glu Glu	575	580	585
Gln Cys Ala Ala	Tyr Asn His Arg Thr	Asp Leu Phe Lys Ser Phe	590	595	600
Pro Gly Pro Met	Asp Trp Val Pro Arg	Tyr Thr Gly Val Ala Pro	605	610	615
Gln Asp Gln Cys	Lys Leu Thr Cys Gln	Ala Arg Ala Leu Gly Tyr	620	625	630
Tyr Tyr Val Leu	Glu Pro Arg Val Val	Asp Gly Thr Pro Cys Ser	635	640	645
Pro Asp Ser Ser	Ser Val Cys Val Gln	Gly Arg Cys Ile His Ala	650	655	660
Gly Cys Asp Arg	Ile Ile Gly Ser Lys	Lys Lys Phe Asp Lys Cys	665	670	675
Met Val Cys Gly	Gly Asp Gly Ser Gly	Cys Ser Lys Gln Ser Gly	680	685	690
Ser Phe Arg Lys	Phe Arg Tyr Gly Tyr	Asn Asn Val Val Thr Ile	695	700	705
Pro Ala Gly Ala	Thr His Ile Leu Val	Arg Gln Gln Gly Asn Pro	710	715	720
Gly His Arg Ser	Ile Tyr Leu Ala Leu	Lys Leu Pro Asp Gly Ser			

725	730	735
Tyr Ala Leu Asn Gly Glu Tyr Thr Leu	Met Pro Ser Pro Thr Asp	
740	745	750
Val Val Leu Pro Gly Ala Val Ser Leu	Arg Tyr Ser Gly Ala Thr	
755	760	765
Ala Ala Ser Glu Thr Leu Ser Gly His	Gly Pro Leu Ala Gln Pro	
770	775	780
Leu Thr Leu Gln Val Leu Val Ala Gly	Asn Pro Gln Asp Thr Arg	
785	790	795
Leu Arg Tyr Ser Phe Phe Val Pro Arg	Pro Thr Pro Ser Thr Pro	
800	805	810
Arg Pro Thr Pro Gln Asp Trp Leu His	Arg Arg Ala Gln Ile Leu	
815	820	825
Glu Ile Leu Arg Arg Arg Pro Trp Ala	Gly Arg Lys	
830	835	

<210> 318  
 <211> 23  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-23  
 <223> Synthetic construct.

<400> 318  
 ccctgaagct gccagatggc tcc 23

<210> 319  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 319  
 ctgtgctctt cggcgcagcc agtc 24

<210> 320  
 <211> 43  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-43  
 <223> Synthetic construct.

<400> 320

ccacagatgt ggtactgcct ggggcagtca gcttgcgcta cag 43

<210> 321

<211> 1197

<212> DNA

<213> Homo sapiens

<400> 321

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<210> 322



<211> 317  
 <212> PRT  
 <213> Homo sapiens

<400> 322

Met	Ala	Lys	Asn	Pro	Pro	Glu	Asn	Cys	Glu	Asp	Cys	His	Ile	Leu	1	5	10	15
Asn	Ala	Glu	Ala	Phe	Lys	Ser	Lys	Lys	Ile	Cys	Lys	Ser	Leu	Lys	20	25	30	
Ile	Cys	Gly	Leu	Val	Phe	Gly	Ile	Leu	Ala	Leu	Thr	Leu	Ile	Val	35	40	45	
Leu	Phe	Trp	Gly	Ser	Lys	His	Phe	Trp	Pro	Glu	Val	Pro	Lys	Lys	50	55	60	
Ala	Tyr	Asp	Met	Glu	His	Thr	Phe	Tyr	Ser	Asn	Gly	Glu	Lys	Lys	65	70	75	
Lys	Ile	Tyr	Met	Glu	Ile	Asp	Pro	Val	Thr	Arg	Thr	Glu	Ile	Phe	80	85	90	
Arg	Ser	Gly	Asn	Gly	Thr	Asp	Glu	Thr	Leu	Glu	Val	His	Asp	Phe	95	100	105	
Lys	Asn	Gly	Tyr	Thr	Gly	Ile	Tyr	Phe	Val	Gly	Leu	Gln	Lys	Cys	110	115	120	
Phe	Ile	Lys	Thr	Gln	Ile	Lys	Val	Ile	Pro	Glu	Phe	Ser	Glu	Pro	125	130	135	
Glu	Glu	Glu	Ile	Asp	Glu	Asn	Glu	Glu	Ile	Thr	Thr	Thr	Phe	Phe	140	145	150	
Glu	Gln	Ser	Val	Ile	Trp	Val	Pro	Ala	Glu	Lys	Pro	Ile	Glu	Asn	155	160	165	
Arg	Asp	Phe	Leu	Lys	Asn	Ser	Lys	Ile	Leu	Glu	Ile	Cys	Asp	Asn	170	175	180	
Val	Thr	Met	Tyr	Trp	Ile	Asn	Pro	Thr	Leu	Ile	Ser	Val	Ser	Glu	185	190	195	
Leu	Gln	Asp	Phe	Glu	Glu	Glu	Gly	Glu	Asp	Leu	His	Phe	Pro	Ala	200	205	210	
Asn	Glu	Lys	Lys	Gly	Ile	Glu	Gln	Asn	Glu	Gln	Trp	Val	Val	Pro	215	220	225	
Gln	Val	Lys	Val	Glu	Lys	Thr	Arg	His	Ala	Arg	Gln	Ala	Ser	Glu	230	235	240	
Glu	Glu	Leu	Pro	Ile	Asn	Asp	Tyr	Thr	Glu	Asn	Gly	Ile	Glu	Phe	245	250	255	
Asp	Pro	Met	Leu	Asp	Glu	Arg	Gly	Tyr	Cys	Cys	Ile	Tyr	Cys	Arg	260	265	270	

[illegible]

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<210> 323
<211> 1174
<212> DNA
<213> Homo sapiens
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ggcgtgacag cttctgggct tcctgctcag cttcctgggc atggtgggca 150
cgttgatcac caccatcctg ccgcaactgg ggaggacagc gcacgtgggc 200
accaacatcc tcacggccgt gtccctacct aaagggctct ggatggagt 250
tgtgtggcac agcacaggca tctaccagt ccagatctac cgatccctgc 300
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cacgcgtgac gccaaaggga caccgcgcaa gaccaccttt gccatcctcg 450
gcggcacccct cttcatcctg gcgggcctcc tgtgcatggg ggccgtctcc 500
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gtccccggcg ggactgtcaa tggaggcagg ggttcagca caaagtttac 900
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ctttagagca caggggacaga gggggaaata agaggaggag aaagctctct 1000

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ataccaaaaga ctgaaaaaaa aaatcctgtc tgtttttgta tttattatat 1050  
atatttatgt gggtgatttg ataacaagtt taatataaag tgacttgga 1100  
gtttggtcag tgggggttggg ttgtgatcca ggaataaacc ttgcggatgt 1150  
ggctgtttat gaaaaaaaaa aaaa 1174

<210> 324  
<211> 239  
<212> PRT  
<213> Homo sapiens

<400> 324  
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Arg Arg Thr Ala His Val Gly Thr Asn Ile Leu Thr Ala Val Ser  
35 40 45  
Tyr Leu Lys Gly Leu Trp Met Glu Cys Val Trp His Ser Thr Gly  
50 55 60  
Ile Tyr Gln Cys Gln Ile Tyr Arg Ser Leu Leu Ala Leu Pro Gln  
65 70 75  
Asp Leu Gln Ala Ala Arg Ala Leu Met Val Ile Ser Cys Leu Leu  
80 85 90  
Ser Gly Ile Ala Cys Ala Cys Ala Val Ile Gly Met Lys Cys Thr  
95 100 105  
Arg Cys Ala Lys Gly Thr Pro Ala Lys Thr Thr Phe Ala Ile Leu  
110 115 120  
Gly Gly Thr Leu Phe Ile Leu Ala Gly Leu Leu Cys Met Val Ala  
125 130 135  
Val Ser Trp Thr Thr Asn Asp Val Val Gln Asn Phe Tyr Asn Pro  
140 145 150  
Leu Leu Pro Ser Gly Met Lys Phe Glu Ile Gly Gln Ala Leu Tyr  
155 160 165  
Leu Gly Phe Ile Ser Ser Ser Leu Ser Leu Ile Gly Gly Thr Leu  
170 175 180  
Leu Cys Leu Ser Cys Gln Asp Glu Ala Pro Tyr Arg Pro Tyr Gln  
185 190 195  
Ala Pro Pro Arg Ala Thr Thr Thr Thr Ala Asn Thr Ala Pro Ala  
200 205 210  
Tyr Gln Pro Pro Ala Ala Tyr Lys Asp Asn Arg Ala Pro Ser Val  
215 220 225

Thr Ser Ala Thr His Ser Gly Tyr Arg Leu Asn Asp Tyr Val  
230 235

<210> 325  
<211> 2121  
<212> DNA  
<213> Homo sapiens

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gcatcgcggc caccgggatg gacatgtgga gcaccagga cctgtacgac 200  
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gacttccagc catgctgcag gcagtgcgag ccctgatgat cgtaggcac 350  
gtcctgggtg ccattggcct cctggatatc atctttgccc tgaaatgcat 400  
ccgcattggc agcatggagg actctgcaa agccaacatg aactgacct 450  
ccgggatcat gttcattgtc tcaggctctt gtgcaattgc tggagtgtct 500  
gtgtttgcca acatgctggt gactaacttc tggatgtcca cagctaacat 550  
gtacaccggc atgggtggga tgggtgcagac tgttcagacc aggtacacat 600  
ttggtgcggc tctgttcgtg ggctgggtcg ctggaggcct cacactaatt 650  
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caactacaaa gccgtttctt atcatgcctc aggccacagt gttgcctaca 750  
agcctggagg cttcaaggcc agcactggct ttgggtccaa caccaaaaac 800  
aagaagatat acgatggagg tgcccgaca gaggacgagg tacaatctta 850  
tccttccaag cagactatg tgtaatgctc taagacctct cagcacgggc 900  
ggaagaaact cccggagagc tcacccaaaa aacaaggaga tcccatctag 950  
atctctctct gcttttgact cacagctgga agttagaaaa gcctcgattt 1000  
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ttccaccata aaacagctga gttatttatg aattagaggc tatagctcac 1100  
atcttcaatc ctctatttct ttttttaaata ataactttct actctgatga 1150  
gagaatgtgg ttttaatctc tctctcacat tttgatgatt tagacagact 1200  
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tatccccaag aaaacttttg aaaggaaaga gtagacccaa agatgttatt 1300  
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 cacttactga agaagaagca ataagagaaa gatatttgta atctctccag 1400  
 cccatgatct cgggttttctt acaactgtgat cttaaaagtt accaaaccaa 1450  
 agtcattttc agtttgaggc aaccaaacct ttctactgct gttgacatct 1500  
 tcttattaca gcaacaccat tctaggagtt tctgagctc tccactggag 1550  
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 atttttttta atttaagtcc taaatatagt taaaataaat aatgttttag 1650  
 taaaatgata cactatctct gtgaaatagc ctcacccta catgtggata 1700  
 gaaggaaatg aaaaaataat tgctttgaca ttgtctatat ggtactttgt 1750  
 aaagtcatgc ttaagtacaa attccatgaa aagctcacac ctgtaatcct 1800  
 agcactttgg gaggctgagg aggaaggatc acttgagccc agaagttcga 1850  
 gactagcctg ggcaacatgg agaagccctg tctctacaaa atacagagag 1900  
 aaaaaatcag ccagtcatgg tggcatacac ctgtagtccc agcattccgg 1950  
 gaggctgagg tgggaggatc acttgagccc agggagggtt gggctgcagt 2000  
 gagccatgat cacaccactg cactccagcc aggtgacata gcgagatcct 2050  
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 aggttaaaac taattcttta a 2121

<210> 326  
 <211> 261  
 <212> PRT  
 <213> Homo sapiens

<400> 326  
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 Leu Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp  
 20 25 30  
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 35 40 45  
 Tyr Glu Gly Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe  
 50 55 60  
 Thr Glu Cys Arg Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met  
 65 70 75  
 Leu Gln Ala Val Arg Ala Leu Met Ile Val Gly Ile Val Leu Gly

80									85					90				
Ala	Ile	Gly	Leu	Leu 95	Val	Ser	Ile	Phe	Ala 100	Leu	Lys	Cys	Ile	Arg 105				
Ile	Gly	Ser	Met	Glu 110	Asp	Ser	Ala	Lys	Ala 115	Asn	Met	Thr	Leu	Thr 120				
Ser	Gly	Ile	Met	Phe 125	Ile	Val	Ser	Gly	Leu 130	Cys	Ala	Ile	Ala	Gly 135				
Val	Ser	Val	Phe	Ala 140	Asn	Met	Leu	Val	Thr 145	Asn	Phe	Trp	Met	Ser 150				
Thr	Ala	Asn	Met	Tyr 155	Thr	Gly	Met	Gly	Gly 160	Met	Val	Gln	Thr	Val 165				
Gln	Thr	Arg	Tyr	Thr 170	Phe	Gly	Ala	Ala	Leu 175	Phe	Val	Gly	Trp	Val 180				
Ala	Gly	Gly	Leu	Thr 185	Leu	Ile	Gly	Gly	Val 190	Met	Met	Cys	Ile	Ala 195				
Cys	Arg	Gly	Leu	Ala 200	Pro	Glu	Glu	Thr	Asn 205	Tyr	Lys	Ala	Val	Ser 210				
Tyr	His	Ala	Ser	Gly 215	His	Ser	Val	Ala	Tyr 220	Lys	Pro	Gly	Gly	Phe 225				
Lys	Ala	Ser	Thr	Gly 230	Phe	Gly	Ser	Asn	Thr 235	Lys	Asn	Lys	Lys	Ile 240				
Tyr	Asp	Gly	Gly	Ala 245	Arg	Thr	Glu	Asp	Glu 250	Val	Gln	Ser	Tyr	Pro 255				
Ser	Lys	His	Asp	Tyr 260	Val													

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<210> 327
<211> 2010
<212> DNA
<213> Homo sapiens
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<400>	327					
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cattgaaaac	aacatcgtgg	tttttgaaaa	cttctgggaa	ggactgtgga	250	
tgaattgctg	gaggcaggct	aacatcagga	tgcagtgcaa	aatctatgat	300	
tccttgcctg	ctctttctcc	ggacctacag	gcagccagag	gactgatgtg	350	

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 ctgctgacgg ctggaatcat cttcatcatc acgggcatgg tgggtgctcat 500  
 ccctgtgagc tgggttgcca atgccatcat cagagatttc tataactcaa 550  
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 tttttgttgc aacgaaaaga gcagtagcta cagatactcg ataccttccc 700  
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 tactccagaa gtcagtatgt gtagttgtgt atgttttttt aactttacta 800  
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 caaagaaaact ttgattttact gttcttaact gcctaattctt aattacagga 900  
 actgtgcac agctattttat gattctataa gctatttcag cagaatgaga 950  
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 taaggtggtt caagcatcta ctctttttat catttacttc aaaatgacat 1050  
 tgctaaagac tgcattattt tactactgta atttctccac gacatagcat 1100  
 tatgtacata gatgagtgtg acattttatat ctccataga gacatgctta 1150  
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 gaagattaaa atgaaggctt taatcagcat tgtaaaggaa attgaatggc 1350  
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atctttgttc tgtgaaaaat aaatttcctt cttgtaccat ttctgttttag 1850  
 ttttactaaa atctgtaaat actgtatttt tctgttttatt ccaaatttga 1900  
 tgaaactgac aatccaattt gaaagtttgt gtcgacgtct gtctagctta 1950  
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<210> 328

<211> 225

<212> PRT

<213> Homo sapiens

<400> 328

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Arg	Val	Ser	Ala	Phe	Ile	Glu	Asn	Asn	Ile	Val	Val	Phe	Glu	Asn	35	40	45	
Phe	Trp	Glu	Gly	Leu	Trp	Met	Asn	Cys	Val	Arg	Gln	Ala	Asn	Ile	50	55	60	
Arg	Met	Gln	Cys	Lys	Ile	Tyr	Asp	Ser	Leu	Leu	Ala	Leu	Ser	Pro	65	70	75	
Asp	Leu	Gln	Ala	Ala	Arg	Gly	Leu	Met	Cys	Ala	Ala	Ser	Val	Met	80	85	90	
Ser	Phe	Leu	Ala	Phe	Met	Met	Ala	Ile	Leu	Gly	Met	Lys	Cys	Thr	95	100	105	
Arg	Cys	Thr	Gly	Asp	Asn	Glu	Lys	Val	Lys	Ala	His	Ile	Leu	Leu	110	115	120	
Thr	Ala	Gly	Ile	Ile	Phe	Ile	Ile	Thr	Gly	Met	Val	Val	Leu	Ile	125	130	135	
Pro	Val	Ser	Trp	Val	Ala	Asn	Ala	Ile	Ile	Arg	Asp	Phe	Tyr	Asn	140	145	150	
Ser	Ile	Val	Asn	Val	Ala	Gln	Lys	Arg	Glu	Leu	Gly	Glu	Ala	Leu	155	160	165	
Tyr	Leu	Gly	Trp	Thr	Thr	Ala	Leu	Val	Leu	Ile	Val	Gly	Gly	Ala	170	175	180	
Leu	Phe	Cys	Cys	Val	Phe	Cys	Cys	Asn	Glu	Lys	Ser	Ser	Ser	Tyr	185	190	195	
Arg	Tyr	Ser	Ile	Pro	Ser	His	Arg	Thr	Thr	Gln	Lys	Ser	Tyr	His	200	205	210	



Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val  
 215 220 225

<210> 329  
 <211> 1315  
 <212> DNA  
 <213> Homo sapiens

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 cgcttgtgc tcacctctgg gattgtcttt gtcattctag gggctctgac 400  
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 accccctggg ggctgaggcc caaaagcggg agctgggggc ctccctctac 500  
 ttgggctggg cggcctcagg ctttttgttg ctgggtgggg ggttgctgtg 550  
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 gctactcaac atctgcccct gccatctctc gggggccctc tgagtaccct 650  
 accaagaatt acgtctgacg tggaggggaa tgggggctcc gctggcgcta 700  
 gagccatcca gaagtggcag tgcccaacag ctttgggatg ggttcgtacc 750  
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tgttttgtta gtcga 1315

<210> 330

<211> 220

<212> PRT

<213> Homo sapiens

<400> 330

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Leu Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp  
20 25 30

Lys Val Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val  
35 40 45

Val Trp Glu Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly  
50 55 60

Gln Met Gln Cys Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln  
65 70 75

Asp Leu Gln Ala Ala Arg Ala Leu Cys Val Ile Ala Leu Leu Val  
80 85 90

Ala Leu Phe Gly Leu Leu Val Tyr Leu Ala Gly Ala Lys Cys Thr  
95 100 105

Thr Cys Val Glu Glu Lys Asp Ser Lys Ala Arg Leu Val Leu Thr  
110 115 120

Ser Gly Ile Val Phe Val Ile Ser Gly Val Leu Thr Leu Ile Pro  
125 130 135

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Val Cys Trp Thr  Ala His Ala Ile Ile  Arg Asp Phe Tyr Asn Pro
                    140                      145                      150

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Leu Val Ala Glu Ala Gln Lys Arg Glu Leu Gly Ala Ser Leu Tyr  
155 160 165

Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Gly Gly Gly Leu  
170 175 180

Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His  
185 190 195

Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly  
200 205 210

Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val  
215 220

<210> 331

<211> 1160

<212> DNA

[illegible]

<400> 331

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gtaaaggcaa	tggcatttta	tcccttgcaa	attgctgggc	tggttcttgg	150
gttccttggc	atggtgggga	ctcttgccac	aacccttctg	cctcagtgg	200
ggagtatcag	cttttgttgg	cagcaacatt	attgtctttg	agaggctctg	250
ggaagggctc	tggatgaatt	gcatccgaca	agccagggtc	cggttgcaat	300
gcaagttcta	tagctccttg	ttggctctcc	cgctgcct	ggaaacagcc	350
cgggccctca	tgtgtgtggc	tgttgctctc	tccttgatcg	ccctgcttat	400
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tttctacaac	ccagccatcc	acatagggtc	gaaacgagag	ctgggagcag	600
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ctgctttgtg	gattttgctg	ctgcaacaga	aagaagcaag	ggtacagata	700
tcagtgcct	ggctaccgtg	tgccacacac	agataagcga	agaaatacga	750
caatgcttag	taagacctcc	accagttag	tctaattgcct	ccttttggct	800
ccaagtatgg	actatgggtc	atgtttttta	taaagtctctg	ctagaaactg	850
taagtatgtg	aggcaggaga	acttgcttta	tgtctagatt	tacattgata	900
cgaaagtttc	aatttggttac	tgggtggtagg	aatgaaaatg	acttacttgg	950
acattctgac	ttcagggtgta	ttaaatgcat	tgactattgt	tggacccaat	1000
cgctgctcca	attttcatat	tctaaattca	agtataccca	taatcattag	1050
caagtgtaca	atgatggact	acttattact	ttttgaccat	catgtattat	1100
ctgataagaa	tctaaagttg	aaattgatat	tctataacaa	taaaacatat	1150
acctatttcta	1160				

<210> 332

<211> 173

<212> PRT

<213> Homo sapiens

<400> 332

Met Asn Cys Ile Arg Gln Ala Arg Val Arg Leu Gln Cys Lys Phe

1	5	10	15
Tyr Ser Ser Leu Leu Ala Leu Pro Pro Ala Leu Glu Thr Ala Arg	20	25	30
Ala Leu Met Cys Val Ala Val Ala Leu Ser Leu Ile Ala Leu Leu	35	40	45
Ile Gly Ile Cys Gly Met Lys Gln Val Gln Cys Thr Gly Ser Asn	50	55	60
Glu Arg Ala Lys Ala Tyr Leu Leu Gly Thr Ser Gly Val Leu Phe	65	70	75
Ile Leu Thr Gly Ile Phe Val Leu Ile Pro Val Ser Trp Thr Ala	80	85	90
Asn Ile Ile Ile Arg Asp Phe Tyr Asn Pro Ala Ile His Ile Gly	95	100	105
Gln Lys Arg Glu Leu Gly Ala Ala Leu Phe Leu Gly Trp Ala Ser	110	115	120
Ala Ala Val Leu Phe Ile Gly Gly Gly Leu Leu Cys Gly Phe Cys	125	130	135
Cys Cys Asn Arg Lys Lys Gln Gly Tyr Arg Tyr Pro Val Pro Gly	140	145	150
Tyr Arg Val Pro His Thr Asp Lys Arg Arg Asn Thr Thr Met Leu	155	160	165
Ser Lys Thr Ser Thr Ser Tyr Val	170		

<210> 333  
 <211> 535  
 <212> DNA  
 <213> Homo sapiens

<400> 333  
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 atcactgggg gtctccttct gctctgtaca gtggtctatt tctgtagcag 100  
 ctcagaagct gctagtctgt ctcaaaaaaa agtggactgc agcatttaca 150  
 agaagtatcc agtgggtggc atcccctgcc ccatcacata cctaccagtt 200  
 tgtggttctg actacatcac ctatgggaat gaatgtcact tgtgtaccga 250  
 gagcttgaaa agtaatggaa gagttcagtt tcttcacgat ggaagttgct 300  
 aaattctcca tggacataga gagaaaggaa tgatattctc atcatcatct 350  
 tcatcatccc aggctctgac tgagtttctt tcagttttac tgatgttctg 400  
 ggtgggggac agagccagat tcagagtaat cttgactgaa tggagaaagt 450

ttctgtgcta cccctacaaa cccatgctc actgacagac cagcattttt 500

tttttaacac gtcaataaaa aaataatctc ccaga 535

<210> 334

<211> 85

<212> PRT

<213> Homo sapiens

<400> 334

Met Lys Ile Thr Gly Gly Leu Leu Leu Leu Cys Thr Val Val Tyr  
1 5 10 15

Phe Cys Ser Ser Ser Glu Ala Ala Ser Leu Ser Pro Lys Lys Val  
20 25 30

Asp Cys Ser Ile Tyr Lys Lys Tyr Pro Val Val Ala Ile Pro Cys  
35 40 45

Pro Ile Thr Tyr Leu Pro Val Cys Gly Ser Asp Tyr Ile Thr Tyr  
50 55 60

Gly Asn Glu Cys His Leu Cys Thr Glu Ser Leu Lys Ser Asn Gly  
65 70 75

Arg Val Gln Phe Leu His Asp Gly Ser Cys  
80 85

<210> 335

<211> 742

<212> DNA

<213> Homo sapiens

<400> 335

cccgcgcccg gttctccctc gcagcacctc gaagtgcgcc cctcgccctc 50

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tggccctgac cgggctggcg ctgctcctgc tcctgtgctg gggcccaggt 150

ggcataagtg gaaataaact caagctgatg cttcaaaaac gagaagcacc 200

tggtccaact aagactaaag tggccgttga tgagaataaa gccaaagaat 250

tccttggcag cctgaagcgc cagaagcggc agctgtggga ccggactcgg 300

cccgaggtgc agcagtggta ccagcagttt ctctacatgg gctttgatga 350

agcgaaattt gaagatgaca tcacctattg gcttaacaga gatcgaaatg 400

gacatgaata ctatggcgat tactaccaac gtcactatga tgaagactct 450

gcaattggtc cccggagccc ctacggcttt aggcattggag ccagcgtcaa 500

ctacgatgac tactaaccat gacttgccac acgctgtaca agaagcaaat 550

agcgattctc ttcattgtatc tcctaattgcc ttacactact tggtttctga 600

tttgctctat ttcagcagat cttttctacc tactttgtgt gatcaaaaaa 650  
gaagaggttaa aacaacacat gtaaatgcct ttgatattt catgggaatg 700  
cctctcattt aaaaatagaa ataaagcatt ttgttaaaaa ga 742

<210> 336  
<211> 148  
<212> PRT  
<213> Homo sapiens

<400> 336  
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1 5 10 15  
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20 25 30  
Gly Asn Lys Leu Lys Leu Met Leu Gln Lys Arg Glu Ala Pro Val  
35 40 45  
Pro Thr Lys Thr Lys Val Ala Val Asp Glu Asn Lys Ala Lys Glu  
50 55 60  
Phe Leu Gly Ser Leu Lys Arg Gln Lys Arg Gln Leu Trp Asp Arg  
65 70 75  
Thr Arg Pro Glu Val Gln Gln Trp Tyr Gln Gln Phe Leu Tyr Met  
80 85 90  
Gly Phe Asp Glu Ala Lys Phe Glu Asp Asp Ile Thr Tyr Trp Leu  
95 100 105  
Asn Arg Asp Arg Asn Gly His Glu Tyr Tyr Gly Asp Tyr Tyr Gln  
110 115 120  
Arg His Tyr Asp Glu Asp Ser Ala Ile Gly Pro Arg Ser Pro Tyr  
125 130 135  
Gly Phe Arg His Gly Ala Ser Val Asn Tyr Asp Asp Tyr  
140 145

<210> 337  
<211> 1310  
<212> DNA  
<213> Homo sapiens

<400> 337  
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tgaaggggtg ggtgatgagg tgaccgtcct tttctcgggtg cttgcctgcc 150  
ttctggtgct ggcccttgcc tgggtctcaa cgacaccgc tgagggcggg 200  
gaccactgc ccagccgctc agggaccca acgcatccc agccagcgc 250

agccatggca gctaccgaca gcatgagagg ggaggcccca ggggcagaga 300  
 cccccagcct gagacacaga ggtcaagctg cacagccaga gccagcacg 350  
 ggggttcacag caacaccgcc agccccggac tccccgcagg agccccctgt 400  
 gctacggctg aaattcctca atgattcaga gcagggtggcc agggcctggc 450  
 cccacgacac cattggctcc ttgaaaagga cccagtttcc cggccgggaa 500  
 cagcagggtgc gactcatcta ccaagggcag ctgctaggcg acgacacca 550  
 gaccctgggc agccttcacc tccctcccaa ctgcgttctc cactgccacg 600  
 tgtccacgag agtcgggtccc ccaaatcccc cctgcccgcc ggggtccgag 650  
 cccggccccct ccggggtgga aatcggcagc ctgctgctgc ccctgctgct 700  
 cctgctgttg ctgctgctct ggtactgcca gatccagtac cggcccttct 750  
 ttccccctgac cgccactctg ggccctggccg gcttcaccct gctcctcagt 800  
 ctccctggcct ttgccatgta ccgcccgtag tgccctccgcg ggcgcttggc 850  
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 ctgcctgccc agggccgcct ctccggcctg cctcttcccg ctgccctgga 950  
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 gccccgggca gagccgggccc gccccggggg cccgtcttag tgttctgccg 1150  
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 acgccaggtc ggtgggaggg tggatgaagg gagcggggag gggcagagga 1250  
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 aaaaaaaaaa 1310

<210> 338  
 <211> 246  
 <212> PRT  
 <213> Homo sapiens

<400> 338  
 Met Thr Leu Ile Glu Gly Val Gly Asp Glu Val Thr Val Leu Phe  
 1 5 10 15  
 Ser Val Leu Ala Cys Leu Leu Val Leu Ala Leu Ala Trp Val Ser  
 20 25 30  
 Thr His Thr Ala Glu Gly Gly Asp Pro Leu Pro Gln Pro Ser Gly  
 35 40 45

Thr Pro Thr Pro Ser Gln Pro Ser Ala Ala Met Ala Ala Thr Asp  
50 55 60

Ser Met Arg Gly Glu Ala Pro Gly Ala Glu Thr Pro Ser Leu Arg  
65 70 75

His Arg Gly Gln Ala Ala Gln Pro Glu Pro Ser Thr Gly Phe Thr  
80 85 90

Ala Thr Pro Pro Ala Pro Asp Ser Pro Gln Glu Pro Leu Val Leu  
95 100 105

Arg Leu Lys Phe Leu Asn Asp Ser Glu Gln Val Ala Arg Ala Trp  
110 115 120

Pro His Asp Thr Ile Gly Ser Leu Lys Arg Thr Gln Phe Pro Gly  
125 130 135

Arg Glu Gln Gln Val Arg Leu Ile Tyr Gln Gly Gln Leu Leu Gly  
140 145 150

Asp Asp Thr Gln Thr Leu Gly Ser Leu His Leu Pro Pro Asn Cys  
155 160 165

Val Leu His Cys His Val Ser Thr Arg Val Gly Pro Pro Asn Pro  
170 175 180

Pro Cys Pro Pro Gly Ser Glu Pro Gly Pro Ser Gly Leu Glu Ile  
185 190 195

Gly Ser Leu Leu Leu Pro Leu Leu Leu Leu Leu Leu Leu Leu  
200 205 210

Trp Tyr Cys Gln Ile Gln Tyr Arg Pro Phe Phe Pro Leu Thr Ala  
215 220 225

Thr Leu Gly Leu Ala Gly Phe Thr Leu Leu Leu Ser Leu Leu Ala  
230 235 240

Phe Ala Met Tyr Arg Pro  
245

<210> 339  
<211> 849  
<212> DNA  
<213> Homo sapiens

<400> 339  
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caagacccta agaaccatca gccctcagct gcacctctc ccctccaagg 150  
atgacaaagg cgctactcat ctatttggtc agcagctttc ttgccctaaa 200  
tcaggccagc ctcatcagtc gctgtgactt ggcccaggtg ctgcagctgg 250



aggacttgga tgggtttgag ggttactccc tgagtgactg gctgtgcctg 300  
gcttttgtgg aaagcaagtt caacatatca aagataaatg aaaatgcgga 350  
tggaagcttt gactatggcc tcttccagat caacagccac tactggtgca 400  
acgattataa gagttactcg gaaaaccttt gccacgtaga ctgtcaagat 450  
ctgctgaatc ccaaccttct tgcaggcatc cactgcgcaa aaaggattgt 500  
gtccggagca cgggggatga acaactgggt agaatggagg ttgcactgtt 550  
caggccggcc actctcctac tggtgacag gatgccgcct gagatgaaac 600  
agggtgcggg tgcaccgtgg agtcattcca agactcctgt cctcactcag 650  
ggattcttca tttcttcttc ctactgcctc cacttcatgt tattttcttc 700  
ccttcccatt tacaactaaa actgaccaga gcccaggaa taaatggttt 750  
tcttggttc ctccttactc ccactctggac ccagtcccct ggttcctgtc 800  
tgttatttgt aaactgagga ccacaataaa gaaatcttta tatttatcg 849

<210> 340  
<211> 148  
<212> PRT  
<213> Homo sapiens

<400> 340  
Met Thr Lys Ala Leu Leu Ile Tyr Leu Val Ser Ser Phe Leu Ala  
1 5 10 15  
Leu Asn Gln Ala Ser Leu Ile Ser Arg Cys Asp Leu Ala Gln Val  
20 25 30  
Leu Gln Leu Glu Asp Leu Asp Gly Phe Glu Gly Tyr Ser Leu Ser  
35 40 45  
Asp Trp Leu Cys Leu Ala Phe Val Glu Ser Lys Phe Asn Ile Ser  
50 55 60  
Lys Ile Asn Glu Asn Ala Asp Gly Ser Phe Asp Tyr Gly Leu Phe  
65 70 75  
Gln Ile Asn Ser His Tyr Trp Cys Asn Asp Tyr Lys Ser Tyr Ser  
80 85 90  
Glu Asn Leu Cys His Val Asp Cys Gln Asp Leu Leu Asn Pro Asn  
95 100 105  
Leu Leu Ala Gly Ile His Cys Ala Lys Arg Ile Val Ser Gly Ala  
110 115 120  
Arg Gly Met Asn Asn Trp Val Glu Trp Arg Leu His Cys Ser Gly  
125 130 135  
Arg Pro Leu Ser Tyr Trp Leu Thr Gly Cys Arg Leu Arg

140

145

<210> 341  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-23  
<223> Synthetic construct.

<400> 341  
ccctccaagg atgacaaagg cgc 23

<210> 342  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-29  
<223> Synthetic construct.

<400> 342  
ggtcagcagc tttcttgccc taaatcagg 29

<210> 343  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 343  
atctcaggcg gcatcctgtc agcc 24

<210> 344  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 344  
gtggatgcct gcaagaaggt tggg 24

<210> 345  
<211> 45  
<212> DNA  
<213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-45  
 <223> Synthetic construct.  
  
 <400> 345  
 agctttcttg ccctaaatca ggccagcctc atcagtcgct gtgac 45  
  
 <210> 346  
 <211> 2575  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 346  
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 actgagaacc caccagctca tcccagacac ctcatagcaa cctatttata 100  
 caaaggggga aagaaacacc tgagcagaat ggaatcatta tttttttccc 150  
 aaggagaaaa ccggggtaaa gggaggggaag caattcaatt tgaagtcctt 200  
 gtgaatgggc tttcagaagg caattaaaga aatccactca gagaggactt 250  
 ggggtgaaac ttgggtcctg tggttttctg attgtaagtg gaagcagggtc 300  
 ttgcacacgc tgttggaaca tgtcaggacc aggttaagtg actggcagaa 350  
 aaacttccag gtggaacaag caacccatgt tctgctgcaa gcttgaagga 400  
 gcctggagcg ggagaaagct aacttgaaca tgacctgttg catttgga 450  
 gttctagcaa catgctccta aggaagcgat acaggcacag accatgcaga 500  
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 ggcgatgttg caccctcccc accacaccct gcaccagact gtcacagccc 600  
 aagccagcaa gcacagccct gaagccaggt accgcctgga ctttggggaa 650  
 tcccaggatt gggactgga agctgaggat gaggggtgaag agtacagccc 700  
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 tggccgtggc cttaccccag gccagaagga accagagcca gggcaggaga 800  
 ggtgggagct accgcctcat caagcagcca aggaggcagg ataaggaagc 850  
 cccaaagagg gactgggggg ctgatgagga cggggagggtg tctgaagaag 900  
 aggagttgac cccgttcagc ctggacccac gtggcctcca ggaggcactc 950  
 agtggccgca tccccctcca gagggctctg cccgagggtgc ggcaccact 1000  
 gtgtctgcag cagcaccctc aggacagcct gccacagcc agcgtcatcc 1050  
 tctgtttcca tgatgaggcc tggccaactc tctgcggac tgtacacagc 1100

334

tatttcattg actgctggct gctta 2575

<210> 347

<211> 639

<212> PRT

<213> Homo sapiens

<400> 347

Met	Leu	Leu	Arg	Lys	Arg	Tyr	Arg	His	Arg	Pro	Cys	Arg	Leu	Gln
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Phe	Leu	Leu	Leu	Leu	Leu	Met	Leu	Gly	Cys	Val	Leu	Met	Met	Val
				20					25					30
Ala	Met	Leu	His	Pro	Pro	His	His	Thr	Leu	His	Gln	Thr	Val	Thr
				35					40					45
Ala	Gln	Ala	Ser	Lys	His	Ser	Pro	Glu	Ala	Arg	Tyr	Arg	Leu	Asp
				50					55					60
Phe	Gly	Glu	Ser	Gln	Asp	Trp	Val	Leu	Glu	Ala	Glu	Asp	Glu	Gly
				65					70					75
Glu	Glu	Tyr	Ser	Pro	Leu	Glu	Gly	Leu	Pro	Pro	Phe	Ile	Ser	Leu
				80					85					90
Arg	Glu	Asp	Gln	Leu	Leu	Val	Ala	Val	Ala	Leu	Pro	Gln	Ala	Arg
				95					100					105
Arg	Asn	Gln	Ser	Gln	Gly	Arg	Arg	Gly	Gly	Ser	Tyr	Arg	Leu	Ile
				110					115					120
Lys	Gln	Pro	Arg	Arg	Gln	Asp	Lys	Glu	Ala	Pro	Lys	Arg	Asp	Trp
				125					130					135
Gly	Ala	Asp	Glu	Asp	Gly	Glu	Val	Ser	Glu	Glu	Glu	Glu	Leu	Thr
				140					145					150
Pro	Phe	Ser	Leu	Asp	Pro	Arg	Gly	Leu	Gln	Glu	Ala	Leu	Ser	Ala
				155					160					165
Arg	Ile	Pro	Leu	Gln	Arg	Ala	Leu	Pro	Glu	Val	Arg	His	Pro	Leu
				170					175					180
Cys	Leu	Gln	Gln	His	Pro	Gln	Asp	Ser	Leu	Pro	Thr	Ala	Ser	Val
				185					190					195
Ile	Leu	Cys	Phe	His	Asp	Glu	Ala	Trp	Ser	Thr	Leu	Leu	Arg	Thr
				200					205					210
Val	His	Ser	Ile	Leu	Asp	Thr	Val	Pro	Arg	Ala	Phe	Leu	Lys	Glu
				215					220					225
Ile	Ile	Leu	Val	Asp	Asp	Leu	Ser	Gln	Gln	Gly	Gln	Leu	Lys	Ser
				230					235					240
Ala	Leu	Ser	Glu	Tyr	Val	Ala	Arg	Leu	Glu	Gly	Val	Lys	Leu	Leu
				245					250					255

Arg Ser Asn Lys	Arg Leu Gly Ala Ile	Arg Ala Arg Met Leu Gly
260	265	270
Ala Thr Arg Ala	Thr Gly Asp Val Leu	Val Phe Met Asp Ala His
275	280	285
Cys Glu Cys His	Pro Gly Trp Leu Glu	Pro Leu Leu Ser Arg Ile
290	295	300
Ala Gly Asp Arg	Ser Arg Val Val Ser	Pro Val Ile Asp Val Ile
305	310	315
Asp Trp Lys Thr	Phe Gln Tyr Tyr Pro	Ser Lys Asp Leu Gln Arg
320	325	330
Gly Val Leu Asp	Trp Lys Leu Asp Phe	His Trp Glu Pro Leu Pro
335	340	345
Glu His Val Arg	Lys Ala Leu Gln Ser	Pro Ile Ser Pro Ile Arg
350	355	360
Ser Pro Val Val	Pro Gly Glu Val Val	Ala Met Asp Arg His Tyr
365	370	375
Phe Gln Asn Thr	Gly Ala Tyr Asp Ser	Leu Met Ser Leu Arg Gly
380	385	390
Gly Glu Asn Leu	Glu Leu Ser Phe Lys	Ala Trp Leu Cys Gly Gly
395	400	405
Ser Val Glu Ile	Leu Pro Cys Ser Arg	Val Gly His Ile Tyr Gln
410	415	420
Asn Gln Asp Ser	His Ser Pro Leu Asp	Gln Glu Ala Thr Leu Arg
425	430	435
Asn Arg Val Arg	Ile Ala Glu Thr Trp	Leu Gly Ser Phe Lys Glu
440	445	450
Thr Phe Tyr Lys	His Ser Pro Glu Ala	Phe Ser Leu Ser Lys Ala
455	460	465
Glu Lys Pro Asp	Cys Met Glu Arg Leu	Gln Leu Gln Arg Arg Leu
470	475	480
Gly Cys Arg Thr	Phe His Trp Phe Leu	Ala Asn Val Tyr Pro Glu
485	490	495
Leu Tyr Pro Ser	Glu Pro Arg Pro Ser	Phe Ser Gly Lys Leu His
500	505	510
Asn Thr Gly Leu	Gly Leu Cys Ala Asp	Cys Gln Ala Glu Gly Asp
515	520	525
Ile Leu Gly Cys	Pro Met Val Leu Ala	Pro Cys Ser Asp Ser Arg
530	535	540
Gln Gln Gln Tyr	Leu Gln His Thr Ser	Arg Lys Glu Ile His Phe



338



ccaagcagga	ggccaagggg	ccggcacagc	ccccatccca	ctgagggtgg	1350
ggcagctgtg	gggagctggg	gccacagggg	ctcctggctc	ctgccccttg	1400
cacaccaccc	ggaacactcc	ccagcccccac	gggcaatcct	atctgctcgc	1450
cctcctgcag	gtggggggcct	cacatatctg	tgacttcggg	tccctgtccc	1500
cacccttgtg	cactcacatg	aaagccttgc	acactcacct	ccaccttcac	1550
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tcagctgact	ctcatgttct	ctcgtctcac	atttgactc	tctccttccc	1650
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gctgctccag	aggtgggtgg	gaggtgagct	gggggctcct	tgggccctca	1850
tcggtcatgg	tctcgtccca	ttccacacca	tttgtttctc	tgtctcccca	1900
tcctactcca	aggatgccgg	catcacccctg	agggctcccc	cttgggaatg	1950
gggtagtgag	gccccagact	tcacccccag	ccactgcta	aaatctgttt	2000
tctgacagat	gggttttggg	gagtcgcctg	ctgcactaca	tgagaaagg	2050
actcccattt	gcccttccct	ttctcttaca	gtcccttttg	tcttgtctgt	2100
cctggctgtc	tgtgtgtgtg	ccattctctg	gacttcagag	cccctgagc	2150
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caggttcttc	cctccttctc	actggttttt	ccaccttcct	ccttccccttc	2400
ttccctggct	cctaggctgt	gatatatatt	tttgatttat	ctctttcttc	2450
ttcttgtggt	gatcatcttg	aattactgtg	ggatgtaagt	ttcaaaattt	2500
tcaaaataaag	cctttgcaag	ataa	2524		

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<210> 352
<211> 243
<212> PRT
<213> Homo sapiens
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<400> 352  
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1 5 10 15

Leu	Leu	Leu	Leu	Leu 20	Leu	Leu	Gln	Leu	Pro 25	Ala	Pro	Ser	Ser	Ala 30
Ser	Glu	Ile	Pro	Lys 35	Gly	Lys	Gln	Lys	Ala 40	Gln	Leu	Arg	Gln	Arg 45
Glu	Val	Val	Asp	Leu 50	Tyr	Asn	Gly	Met	Cys 55	Leu	Gln	Gly	Pro	Ala 60
Gly	Val	Pro	Gly	Arg 65	Asp	Gly	Ser	Pro	Gly 70	Ala	Asn	Val	Ile	Pro 75
Gly	Thr	Pro	Gly	Ile 80	Pro	Gly	Arg	Asp	Gly 85	Phe	Lys	Gly	Glu	Lys 90
Gly	Glu	Cys	Leu	Arg 95	Glu	Ser	Phe	Glu	Glu 100	Ser	Trp	Thr	Pro	Asn 105
Tyr	Lys	Gln	Cys	Ser 110	Trp	Ser	Ser	Leu	Asn 115	Tyr	Gly	Ile	Asp	Leu 120
Gly	Lys	Ile	Ala	Glu 125	Cys	Thr	Phe	Thr	Lys 130	Met	Arg	Ser	Asn	Ser 135
Ala	Leu	Arg	Val	Leu 140	Phe	Ser	Gly	Ser	Leu 145	Arg	Leu	Lys	Cys	Arg 150
Asn	Ala	Cys	Cys	Gln 155	Arg	Trp	Tyr	Phe	Thr 160	Phe	Asn	Gly	Ala	Glu 165
Cys	Ser	Gly	Pro	Leu 170	Pro	Ile	Glu	Ala	Ile 175	Ile	Tyr	Leu	Asp	Gln 180
Gly	Ser	Pro	Glu	Met 185	Asn	Ser	Thr	Ile	Asn 190	Ile	His	Arg	Thr	Ser 195
Ser	Val	Glu	Gly	Leu 200	Cys	Glu	Gly	Ile	Gly 205	Ala	Gly	Leu	Val	Asp 210
Val	Ala	Ile	Trp	Val 215	Gly	Thr	Cys	Ser	Asp 220	Tyr	Pro	Lys	Gly	Asp 225
Ala	Ser	Thr	Gly	Trp 230	Asn	Ser	Val	Ser	Arg 235	Ile	Ile	Ile	Glu	Glu 240

Leu Pro Lys

<210> 353

<211> 480

<212> DNA

<213> Homo sapiens

<400> 353

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cggccaggat ggcatacctgt ctggccctgc gcatggcgct gctgctggtc 100

tccgggggttc tggccctgc ggtgctcaca gacgatgttc cacaggagcc 150  
 cgtgcccacg ctgtggaacg agccggccga gctgccgtcg ggagaaggcc 200  
 ccgtggagag caccagcccc ggccgggagc ccgtggacac cggccccca 250  
 gccccaccg tcgcgccagg acccgaggac agcaccgcgc aggagcggct 300  
 ggaccagggc ggcgggtcgc tggggcccgc cgctatcgcg gccatcgtga 350  
 tcgcgcctt gctggccacc tgcgtggtgc tggcgctcgt ggtcgtcgcg 400  
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 gcggcgcgac tcggcaaaaa aaaaaaaaaa 480

<210> 354  
 <211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 354  
 Met Ala Ser Cys Leu Ala Leu Arg Met Ala Leu Leu Leu Val Ser  
 1 5 10 15  
 Gly Val Leu Ala Pro Ala Val Leu Thr Asp Asp Val Pro Gln Glu  
 20 25 30  
 Pro Val Pro Thr Leu Trp Asn Glu Pro Ala Glu Leu Pro Ser Gly  
 35 40 45  
 Glu Gly Pro Val Glu Ser Thr Ser Pro Gly Arg Glu Pro Val Asp  
 50 55 60  
 Thr Gly Pro Pro Ala Pro Thr Val Ala Pro Gly Pro Glu Asp Ser  
 65 70 75  
 Thr Ala Gln Glu Arg Leu Asp Gln Gly Gly Gly Ser Leu Gly Pro  
 80 85 90  
 Gly Ala Ile Ala Ala Ile Val Ile Ala Ala Leu Leu Ala Thr Cys  
 95 100 105  
 Val Val Leu Ala Leu Val Val Val Ala Leu Arg Lys Phe Ser Ala  
 110 115 120  
 Ser

<210> 355  
 <211> 2134  
 <212> DNA  
 <213> Homo sapiens

<400> 355  
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 gttggccggc ggcgggccgc gacgggcatg gccctgctgc tgtgcctggt 100

gtgcctgacg	gcggcgctgg	cccacggctg	tctgcactgc	cacagcaact	150
tctccaagaa	gttctccttc	taccgccacc	atgtgaactt	caagtcttgg	200
tgggtgggcg	acatccccgt	gtcaggggcg	ctgctcaccg	actggagcga	250
cgacacgatg	aaggagctgc	acctggccat	ccccgccaa	atcacccggg	300
agaagctgga	ccaagtggcg	acagcagtgt	accagatgat	ggatcagctg	350
taccagggga	agatgtactt	ccccgggtat	ttccccaacg	agctgcgaaa	400
catcttccgg	gagcaggtgc	acctcatcca	gaacgccatc	atcgaaaggc	450
acctggcacc	aggcagctgg	ggaggagggc	agctctccag	ggagggaccc	500
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 gctgggcctg cccagggga acgtgggggc ggagactcag ctggacagcc 1950  
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 ctgcgggatg tgattaaagt cctgatgtt tctc 2134

<210> 356  
 <211> 157  
 <212> PRT  
 <213> Homo sapiens

<400> 356  
 Met Ala Leu Leu Cys Leu Val Cys Leu Thr Ala Ala Leu Ala  
 1 5 10 15  
 His Gly Cys Leu His Cys His Ser Asn Phe Ser Lys Lys Phe Ser  
 20 25 30  
 Phe Tyr Arg His His Val Asn Phe Lys Ser Trp Trp Val Gly Asp  
 35 40 45  
 Ile Pro Val Ser Gly Ala Leu Leu Thr Asp Trp Ser Asp Asp Thr  
 50 55 60  
 Met Lys Glu Leu His Leu Ala Ile Pro Ala Lys Ile Thr Arg Glu  
 65 70 75  
 Lys Leu Asp Gln Val Ala Thr Ala Val Tyr Gln Met Met Asp Gln  
 80 85 90  
 Leu Tyr Gln Gly Lys Met Tyr Phe Pro Gly Tyr Phe Pro Asn Glu  
 95 100 105  
 Leu Arg Asn Ile Phe Arg Glu Gln Val His Leu Ile Gln Asn Ala  
 110 115 120  
 Ile Ile Glu Arg His Leu Ala Pro Gly Ser Trp Gly Gly Gly Gln  
 125 130 135  
 Leu Ser Arg Glu Gly Pro Ser Leu Ala Pro Glu Gly Ser Met Pro



ctagagaaag attgttccaa tttgtcattt aatatcaagt ttgtatactg 1250  
cacatgactt acacacaaca tagttcctgc tcttttaagg ttacctaagg 1300  
gttgaaactc taccttcttt cataagcaca tgtccgtctc tgactcagga 1350  
tcaaaaacca aaggatgggtt ttaaacacct ttgtgaaatt gtctttttgc 1400  
cagaagttaa aggctgtctc caagtccctg aactcagcag aaatagacca 1450  
tgtgaaaact ccatgcttgg ttagcatctc caactcccta tgtaaataca 1500  
caacctgcat aataaataaa aggcaatcat gttata 1536

<210> 358  
<211> 273  
<212> PRT  
<213> Homo sapiens

<400> 358  
Met Glu Ala Ala Pro Ser Arg Phe Met Phe Leu Leu Phe Leu Leu  
1 5 10 15  
Thr Cys Glu Leu Ala Ala Glu Val Ala Ala Glu Val Glu Lys Ser  
20 25 30  
Ser Asp Gly Pro Gly Ala Ala Gln Glu Pro Thr Trp Leu Thr Asp  
35 40 45  
Val Pro Ala Ala Met Glu Phe Ile Ala Ala Thr Glu Val Ala Val  
50 55 60  
Ile Gly Phe Phe Gln Asp Leu Glu Ile Pro Ala Val Pro Ile Leu  
65 70 75  
His Ser Met Val Gln Lys Phe Pro Gly Val Ser Phe Gly Ile Ser  
80 85 90  
Thr Asp Ser Glu Val Leu Thr His Tyr Asn Ile Thr Gly Asn Thr  
95 100 105  
Ile Cys Leu Phe Arg Leu Val Asp Asn Glu Gln Leu Asn Leu Glu  
110 115 120  
Asp Glu Asp Ile Glu Ser Ile Asp Ala Thr Lys Leu Ser Arg Phe  
125 130 135  
Ile Glu Ile Asn Ser Leu His Met Val Thr Glu Tyr Asn Pro Val  
140 145 150  
Thr Val Ile Gly Leu Phe Asn Ser Val Ile Gln Ile His Leu Leu  
155 160 165  
Leu Ile Met Asn Lys Ala Ser Pro Glu Tyr Glu Glu Asn Met His  
170 175 180  
Arg Tyr Gln Lys Ala Ala Lys Leu Phe Gln Gly Lys Ile Leu Phe  
185 190 195

Ile	Leu	Val	Asp	Ser	Gly	Met	Lys	Glu	Asn	Gly	Lys	Val	Ile	Ser
				200					205					210
Phe	Phe	Lys	Leu	Lys	Glu	Ser	Gln	Leu	Pro	Ala	Leu	Ala	Ile	Tyr
				215					220					225
Gln	Thr	Leu	Asp	Asp	Glu	Trp	Asp	Thr	Leu	Pro	Thr	Ala	Glu	Val
				230					235					240
Ser	Val	Glu	His	Val	Gln	Asn	Phe	Cys	Asp	Gly	Phe	Leu	Ser	Gly
				245					250					255
Lys	Leu	Leu	Lys	Glu	Asn	Arg	Glu	Ser	Glu	Gly	Lys	Thr	Pro	Lys
				260					265					270

Val Glu Leu

<210> 359  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 359  
 ccagcagtgcc ccatactcca tagc 24

<210> 360  
 <211> 20  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-20  
 <223> Synthetic construct.

<400> 360  
 tgacgagtggt gatacactgc 20

<210> 361  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 361  
 gctctacgga aacttctgct gtgg 24

<210> 362



<211> 50  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-50  
<223> Synthetic construct.

<400> 362  
attcccaggc gtgtcatttg ggatcagcac tgattctgag gttctgacac 50

<210> 363  
<211> 1777  
<212> DNA  
<213> Homo sapiens

<400> 363  
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ccggcgcggg tggcggagag atcagaagcc tcttcccaa gccgagccaa 100  
cctcagcggg gacccgggct cagggacgcg gcgcggcgcg cggcgactgc 150  
agtggctgga cgatggcagc gtccgccgga gccggggcgg tgattgcagc 200  
cccagacagc cggcgctggc tgtggctcgg gctggcggcg gcgcttgggc 250  
tcttgacagc tggagtatca gccttggaag tatatacgcc aaaagaaatc 300  
ttcgtggcaa atggtacaca aggaagctg acctgcaagt tcaagtctac 350  
tagtacgact ggcggttgga cctcagcttc ctggagcttc cagccagagg 400  
gggccgacac tactgtgtcg tttttccact actcccaagg gcaagtgtac 450  
cttgggaatt atccaccatt taaagacaga atcagctggg ctggagacct 500  
tgacaagaaa gatgcatcaa tcaacataga aaatatgcag tttatacaca 550  
atggcaccta tatctgtgat gtcaaaaacc ctctgacat cgttgtccag 600  
cctggacaca ttaggctcta tgtcgtagaa aaagagaatt tgctgtgtt 650  
tccagtttgg gtagtggtgg gcatagttac tgctgtggtc ctaggtctca 700  
ctctgctcat cagcatgatt ctggctgtcc tctatagaag gaaaaactct 750  
aaacgggatt aactggctg cagtacatca gagagtttgt caccagttaa 800  
gcaggctcct cggaagtccc cctccgacac tgagggtctt gtaaagagtc 850  
tgccttctgg atctcaccag ggcccagtcata tatatgcaca gtttagaccac 900  
tccggcggaac atcacagtga caagattaac aagtcagagt ctgtggtgta 950  
tgcggatatc cgaaagaatt aagagaatac ctagaacata tctcagcaa 1000

gaaacaaaac caaactggac tctcgtgcag aaaatgtagc ccattaccac 1050  
atgtagcctt ggagacccag gcaaggacaa gtacacgtgt actcacagag 1100  
ggagagaaaag atgtgtacaa aggatatgta taaatattct atttagtcat 1150  
cctgatatga ggagccagtg ttgcatgatg aaaagatggt atgattctac 1200  
atatgtaccc attgtcttgc tgtttttgta ctttcttttc aggtcattta 1250  
caattgggag atttcagaaa cattcctttc accatcattt agaaatgggt 1300  
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ccttttaatc taagggttta agactgatta gtcttagcat ttactgtagt 1400  
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tttgaccct tgaaatgtgt catatcaatt tctggattca taatagcaag 1650  
attagcaaag gataaatgcc gaaggtcact tcattctgga cacagttgga 1700  
tcaatactga ttaagtagaa aatccaagct ttgcttgaga acttttgtaa 1750  
cgtggagagt aaaaagtatc ggtttta 1777

<210> 364  
<211> 269  
<212> PRT  
<213> Homo sapiens

<400> 364  
Met Ala Ala Ser Ala Gly Ala Gly Ala Val Ile Ala Ala Pro Asp  
1 5 10 15  
Ser Arg Arg Trp Leu Trp Ser Val Leu Ala Ala Ala Leu Gly Leu  
20 25 30  
Leu Thr Ala Gly Val Ser Ala Leu Glu Val Tyr Thr Pro Lys Glu  
35 40 45  
Ile Phe Val Ala Asn Gly Thr Gln Gly Lys Leu Thr Cys Lys Phe  
50 55 60  
Lys Ser Thr Ser Thr Thr Gly Gly Leu Thr Ser Val Ser Trp Ser  
65 70 75  
Phe Gln Pro Glu Gly Ala Asp Thr Thr Val Ser Phe Phe His Tyr  
80 85 90  
Ser Gln Gly Gln Val Tyr Leu Gly Asn Tyr Pro Pro Phe Lys Asp  
95 100 105



cgaattgcta gcatcagcaa aagtctcacc atggttgctc ttgccaaatt 550  
 gtgggaagca gggaaactgg atcttgatat tccagtacaa cattatgttc 600  
 ccgaattccc agaaaaagaa tatgaagggtg aaaagggttc tgtcacaaca 650  
 agattactga tttcccattt aagtggaatt cgtcattatg aaaaggacat 700  
 aaaaaagggtg aaagaagaga aagcttataa agccttgaag atgatgaaag 750  
 agaatgtttgc atttgagcaa gaaaaagaag gcaaaagtaa tgaaaagaat 800  
 gattttacta aattttaaac agagcaggag aatgaagcca aatgccggaa 850  
 ttcaaaacct ggcaagaaaa agaatgattt tgaacaaggc gaattatatt 900  
 tgagagaaaa gtttgaaaat tcaattgaat ccctaagatt atttaaaaat 950  
 gatcctttgt tcttcaaacc tggtagtcag tttttgtatt caacttttgg 1000  
 ctatacccta ctggcagcca tagtagagag agcttcagga tgtaaataatt 1050  
 tggactatat gcagaaaata ttccatgact tggatatgct gacgactgtg 1100  
 caggaagaaa acgagccagt gatttacaat agagcaagggt aaatgaatac 1150  
 cttctgctgt gtctagctat atcgcatctt aacactattt tattaattaa 1200  
 aagtcaaatt ttctttgttt ccattccaaa atcaacctgc cacattttgg 1250  
 gagcttttct acatgtctgt tttctcatct gtaaagtgaa ggaagtaaaa 1300  
 catgtttata aagtaaaaaa a 1321

<210> 366  
 <211> 373  
 <212> PRT  
 <213> Homo sapiens

<400> 366  
 Met Tyr Arg Leu Leu Ser Ala Val Thr Ala Arg Ala Ala Ala Pro  
 1 5 10 15  
 Gly Gly Leu Ala Ser Ser Cys Gly Arg Arg Gly Val His Gln Arg  
 20 25 30  
 Ala Gly Leu Pro Pro Leu Gly His Gly Trp Val Gly Gly Leu Gly  
 35 40 45  
 Leu Gly Leu Gly Leu Ala Leu Gly Val Lys Leu Ala Gly Gly Leu  
 50 55 60  
 Arg Gly Ala Ala Pro Ala Gln Ser Pro Ala Ala Pro Asp Pro Glu  
 65 70 75  
 Ala Ser Pro Leu Ala Glu Pro Pro Gln Glu Gln Ser Leu Ala Pro  
 80 85 90



<211> 30  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-30  
 <223> Synthetic construct.

<400> 367  
 tggaaaagaa gtctggtcag aaggtttagg 30

<210> 368  
 <211> 25  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-25  
 <223> Synthetic construct.

<400> 368  
 catttggtt cattctcctg ctctg 25

<210> 369  
 <211> 28  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-28  
 <223> Synthetic construct.

<400> 369  
 aaaacctcag aacaactcat ttgcacc 28

<210> 370  
 <211> 41  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-41  
 <223> Synthetic construct.

<400> 370  
 gtctcaccat ggttgctctt gccaaattgt gggaagcagg g 41

<210> 371  
 <211> 1150  
 <212> DNA  
 <213> Homo sapiens

<400> 371  
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gaattcggct cgaggctggt gggaagaagc cgagatggcg gcagccagcg 100  
ctggggcaac ccggctgctc ctgctcttgc tgatggcggt agcagcgccc 150  
agtcgagccc ggggcagcgg ctgccggggc gggactggtg cgcgaggggc 200  
tggggcgga ggtcgagagg gcgaggcctg tggcacggtg gggctgctgc 250  
tggagcactc atttgagatc gatgacagtg ccaacttccg gaagcggggc 300  
tcaactgctc ggaaccagca ggatggtacc ttgtccctgt cacagcggca 350  
gctcagcgag gaggagcggg gccgactccg ggatgtggca gccctgaatg 400  
gcctgtaccg ggtccggatc ccaaggcgac ccggggccct ggatggcctg 450  
gaagctggtg gctatgtctc ctcccttctg cctgctgtgt ccctggtgga 500  
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gcccaccaca gcccaggcc ctgagacggc ggccttcatt gagcgcctgg 700  
agatggaaca ggcccagaag gccaagaacc cccaggagca gaagtccttc 750  
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agcttccagc agccaaaagc aactgttgtt ttggcaagac ggtcctgatg 1000  
tacaagcttg attgaaattc actgctcact tgatacgta ttcagaaaacc 1050  
caaggaatgg ctgtcccat cctcatgtgg ctgtgtggag ctgagctgtg 1100  
ttgtgtggca gtttattaaa ctgtcccca gatcgacacg caaaaaaaaa 1150

<210> 372  
<211> 269  
<212> PRT  
<213> Homo sapiens

<400> 372  
Met Ala Ala Ala Ser Ala Gly Ala Thr Arg Leu Leu Leu Leu Leu  
1 5 10 15  
Leu Met Ala Val Ala Ala Pro Ser Arg Ala Arg Gly Ser Gly Cys  
20 25 30  
Arg Ala Gly Thr Gly Ala Arg Gly Ala Gly Ala Glu Gly Arg Glu  
35 40 45

Gly Glu Ala Cys Gly Thr Val Gly Leu Leu Leu Glu His Ser Phe  
50 55 60

Glu Ile Asp Asp Ser Ala Asn Phe Arg Lys Arg Gly Ser Leu Leu  
65 70 75

Trp Asn Gln Gln Asp Gly Thr Leu Ser Leu Ser Gln Arg Gln Leu  
80 85 90

Ser Glu Glu Glu Arg Gly Arg Leu Arg Asp Val Ala Ala Leu Asn  
95 100 105

Gly Leu Tyr Arg Val Arg Ile Pro Arg Arg Pro Gly Ala Leu Asp  
110 115 120

Gly Leu Glu Ala Gly Gly Tyr Val Ser Ser Phe Val Pro Ala Cys  
125 130 135

Ser Leu Val Glu Ser His Leu Ser Asp Gln Leu Thr Leu His Val  
140 145 150

Asp Val Ala Gly Asn Val Val Gly Val Ser Val Val Thr His Pro  
155 160 165

Gly Gly Cys Arg Gly His Glu Val Glu Asp Val Asp Leu Glu Leu  
170 175 180

Phe Asn Thr Ser Val Gln Leu Gln Pro Pro Thr Thr Ala Pro Gly  
185 190 195

Pro Glu Thr Ala Ala Phe Ile Glu Arg Leu Glu Met Glu Gln Ala  
200 205 210

Gln Lys Ala Lys Asn Pro Gln Glu Gln Lys Ser Phe Phe Ala Lys  
215 220 225

Tyr Trp Met Tyr Ile Ile Pro Val Val Leu Phe Leu Met Met Ser  
230 235 240

Gly Ala Pro Asp Thr Gly Gly Gln Gly Gly Gly Gly Gly Gly  
245 250 255

Gly Gly Gly Gly Ser Gly Leu Cys Cys Val Pro Pro Ser Leu  
260 265

<210> 373  
<211> 1706  
<212> DNA  
<213> Homo sapiens

<400> 373  
ggagcgctgc tggaacccga gccggagccg gagccacagc ggggaggggtg 50  
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cagcaggtcg tccgggggcc caccatgctg gtgactgcct accttgettt 150  
tgtaggctc ctggcctcct gcctggggct ggaactgtca agatgccggg 200



ctaaaccccc tgggaagggcc tgcagcaatc cctccttctc tcggttttcaa 250  
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ggccccctac ctctataaac tctaccagca ttactacttc ctggaaggtc 350  
aaattgccat cctctatgtc tgtggccttg cctctacagt cctctttggc 400  
ctagtggcct cctcccttgt ggattggctg ggtcgcaaga attcttgtgt 450  
cctctttctc ctgaattact cactatgctg ctttaaccaa ctctctcaag 500  
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cacacggggc ccctctgggc attatcttct ccagcttcat ggcagccagc 1000  
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tccttcatag ctttctact tattgagttg gcttgtggat tatactttcc 1200  
cagcatgagc ttcctacgga gaaaggatg cctgagaca gagcaggctg 1250  
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ctccttgtcc tccatgacag tgatcgaaaa acaggcactc ggaatatgtt 1350  
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tcttcaccgt ggtaaggcat gatgctgagc tgcgggtacc ttcacctact 1450  
gaggagccct atgccctga gctgtaacc cactccagga caagatagct 1500  
gggacagact cttgaattcc agctatccgg gattgtacag atctctctgt 1550  
gactgacttt gtgactgtcc tgtggtttct cctgccattg ctttgtgttt 1600  
gggaggacat gatgggggtg atggactgga aagaagggtc caaaagttcc 1650

ctctgtgtta ctccattta gaaaataaac actttttaaat gatcaaaaaa 1700

aaaaaa 1706

<210> 374

<211> 450

<212> PRT

<213> Homo sapiens

<400> 374

Met Leu Val Thr Ala Tyr Leu Ala Phe Val Gly Leu Leu Ala Ser  
1 5 10 15

Cys Leu Gly Leu Glu Leu Ser Arg Cys Arg Ala Lys Pro Pro Gly  
20 25 30

Arg Ala Cys Ser Asn Pro Ser Phe Leu Arg Phe Gln Leu Asp Phe  
35 40 45

Tyr Gln Val Tyr Phe Leu Ala Leu Ala Ala Asp Trp Leu Gln Ala  
50 55 60

Pro Tyr Leu Tyr Lys Leu Tyr Gln His Tyr Tyr Phe Leu Glu Gly  
65 70 75

Gln Ile Ala Ile Leu Tyr Val Cys Gly Leu Ala Ser Thr Val Leu  
80 85 90

Phe Gly Leu Val Ala Ser Ser Leu Val Asp Trp Leu Gly Arg Lys  
95 100 105

Asn Ser Cys Val Leu Phe Ser Leu Thr Tyr Ser Leu Cys Cys Leu  
110 115 120

Thr Lys Leu Ser Gln Asp Tyr Phe Val Leu Leu Val Gly Arg Ala  
125 130 135

Leu Gly Gly Leu Ser Thr Ala Leu Leu Phe Ser Ala Phe Glu Ala  
140 145 150

Trp Tyr Ile His Glu His Val Glu Arg His Asp Phe Pro Ala Glu  
155 160 165

Trp Ile Pro Ala Thr Phe Ala Arg Ala Ala Phe Trp Asn His Val  
170 175 180

Leu Ala Val Val Ala Gly Val Ala Ala Glu Ala Val Ala Ser Trp  
185 190 195

Ile Gly Leu Gly Pro Val Ala Pro Phe Val Ala Ala Ile Pro Leu  
200 205 210

Leu Ala Leu Ala Gly Ala Leu Ala Leu Arg Asn Trp Gly Glu Asn  
215 220 225

Tyr Asp Arg Gln Arg Ala Phe Ser Arg Thr Cys Ala Gly Gly Leu  
230 235 240

Arg	Cys	Leu	Leu	Ser 245	Asp	Arg	Arg	Val	Leu 250	Leu	Leu	Gly	Thr	Ile 255
Gln	Ala	Leu	Phe	Glu 260	Ser	Val	Ile	Phe	Ile 265	Phe	Val	Phe	Leu	Trp 270
Thr	Pro	Val	Leu	Asp 275	Pro	His	Gly	Ala	Pro 280	Leu	Gly	Ile	Ile	Phe 285
Ser	Ser	Phe	Met	Ala 290	Ala	Ser	Leu	Leu	Gly 295	Ser	Ser	Leu	Tyr	Arg 300
Ile	Ala	Thr	Ser	Lys 305	Arg	Tyr	His	Leu	Gln 310	Pro	Met	His	Leu	Leu 315
Ser	Leu	Ala	Val	Leu 320	Ile	Val	Val	Phe	Ser 325	Leu	Phe	Met	Leu	Thr 330
Phe	Ser	Thr	Ser	Pro 335	Gly	Gln	Glu	Ser	Pro 340	Val	Glu	Ser	Phe	Ile 345
Ala	Phe	Leu	Leu	Ile 350	Glu	Leu	Ala	Cys	Gly 355	Leu	Tyr	Phe	Pro	Ser 360
Met	Ser	Phe	Leu	Arg 365	Arg	Lys	Val	Ile	Pro 370	Glu	Thr	Glu	Gln	Ala 375
Gly	Val	Leu	Asn	Trp 380	Phe	Arg	Val	Pro	Leu 385	His	Ser	Leu	Ala	Cys 390
Leu	Gly	Leu	Leu	Val 395	Leu	His	Asp	Ser	Asp 400	Arg	Lys	Thr	Gly	Thr 405
Arg	Asn	Met	Phe	Ser 410	Ile	Cys	Ser	Ala	Val 415	Met	Val	Met	Ala	Leu 420
Leu	Ala	Val	Val	Gly 425	Leu	Phe	Thr	Val	Val 430	Arg	His	Asp	Ala	Glu 435
Leu	Arg	Val	Pro	Ser 440	Pro	Thr	Glu	Glu	Pro 445	Tyr	Ala	Pro	Glu	Leu 450

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<210> 375
<211> 1098
<212> DNA
<213> Artificial
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<400> 375
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gccctggaga tgggtccccg cgccgcgggc tgggtgtgtc tcgtgctctg 100
gctccccgcg tgcgtcgcgg ccacaggctt ccgtatccat gattatttgt 150
actttcaagt gctgagtcct ggggacattc gatacatctt cacagccaca 200
cctgccaaag actttggttg tatctttcac acaaggtatg aqcaqattca 250
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ccttgcccc gctgaacctc cagaggcctg cggggaactc agcaacggtt 300  
tcttcatcca ggaccagatt gctctggtgg agaggggggg ctgctccttc 350  
ctctccaaga ctcggttggt ccaggagcac ggcgggcggg cggatgatcat 400  
ctctgacaac gcagttgaca atgacagctt ctacgtggag atgatccagg 450  
acagtaccca gcgcacagct gacatccccg cctcttctct gctcggccga 500  
gacggctaca tgatccgccg ctctctggaa cagcatgggc tgccatgggc 550  
catcatttcc atcccagtca atgtcaccag catccccacc tttgagctgc 600  
tgcaaccgcc ctggaccttc tggtagaaga gtttgtccca cattccagcc 650  
ataagtgact ctgagctggg aaggggaaac ccaggaattt tgctacttgg 700  
aatattggaga tagcatctgg ggacaagtgg agccaggtag aggaaaaggg 750  
tttgggcggt gctaggctga aagggaagcc acaccactgg ccttcccttc 800  
cccaggggcc ccaagggtgt ctcatgctac aagaagaggc aagagacagg 850  
cccagggtct tctggctaga acccgaaaca aaaggagctg aaggcaggtg 900  
gcctgagagc catctgtgac ctgtcacact cacctggctc cagcctcccc 950  
taccaggggt ctctgcacag tgaccttcac agcagttggt ggagtgggtt 1000  
aaagagctgg tgtttgggga ctcaataaac cctcactgac tttttagcaa 1050  
taaagcttct catcagggtt gcaaaaaaaaa aaaaaaaaaa aaaaaaaaa 1098

<210> 376  
<211> 188  
<212> PRT  
<213> Homo sapiens

<400> 376  
Met Val Pro Gly Ala Ala Gly Trp Cys Cys Leu Val Leu Trp Leu  
1 5 10 15  
Pro Ala Cys Val Ala Ala His Gly Phe Arg Ile His Asp Tyr Leu  
20 25 30  
Tyr Phe Gln Val Leu Ser Pro Gly Asp Ile Arg Tyr Ile Phe Thr  
35 40 45  
Ala Thr Pro Ala Lys Asp Phe Gly Gly Ile Phe His Thr Arg Tyr  
50 55 60  
Glu Gln Ile His Leu Val Pro Ala Glu Pro Pro Glu Ala Cys Gly  
65 70 75  
Glu Leu Ser Asn Gly Phe Phe Ile Gln Asp Gln Ile Ala Leu Val  
80 85 90

Glu Arg Gly Gly Cys Ser Phe Leu Ser Lys Thr Arg Val Val Gln  
 95 100 105  
 Glu His Gly Gly Arg Ala Val Ile Ile Ser Asp Asn Ala Val Asp  
 110 115 120  
 Asn Asp Ser Phe Tyr Val Glu Met Ile Gln Asp Ser Thr Gln Arg  
 125 130 135  
 Thr Ala Asp Ile Pro Ala Leu Phe Leu Leu Gly Arg Asp Gly Tyr  
 140 145 150  
 Met Ile Arg Arg Ser Leu Glu Gln His Gly Leu Pro Trp Ala Ile  
 155 160 165  
 Ile Ser Ile Pro Val Asn Val Thr Ser Ile Pro Thr Phe Glu Leu  
 170 175 180  
 Leu Gln Pro Pro Trp Thr Phe Trp  
 185

<210> 377  
 <211> 496  
 <212> DNA  
 <213> Artificial

<220>  
 <221> unsure  
 <222> 396  
 <223> unknown base

<400> 377  
 tctgcctcca ctgctctgtg ctgggatcat ggaacttgca ctgctgtgtg 50  
 ggctggtggt gatggctggt gtgattccaa tccagggcgg gatcctgaac 100  
 ctgaacaaga tgggtcaagca agtgactggg aaaatgccca tcctctccta 150  
 ctggccctac ggctgtcact gcggactagg tggcagaggc caacccaaag 200  
 atgccacgga ctggtgtctgc cagacccatg actgctgcta tgaccacctg 250  
 aagacccagg ggtgcggcat ctacaaggac aacaacaaaa gcagcataca 300  
 ttgtatggat ttatctcaac gctattgttt aatggctgtg tttaatgtga 350  
 tctatctgga aaatgaggac tccgaataaa aagctattac tawttnaaaa 400  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 496

<210> 378  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 378

Met Glu Leu Ala Leu Leu Cys Gly Leu Val Val Met Ala Gly Val  
 1 5 10 15  
 Ile Pro Ile Gln Gly Gly Ile Leu Asn Leu Asn Lys Met Val Lys  
 20 25 30  
 Gln Val Thr Gly Lys Met Pro Ile Leu Ser Tyr Trp Pro Tyr Gly  
 35 40 45  
 Cys His Cys Gly Leu Gly Gly Arg Gly Gln Pro Lys Asp Ala Thr  
 50 55 60  
 Asp Trp Cys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys  
 65 70 75  
 Thr Gln Gly Cys Gly Ile Tyr Lys Asp Asn Asn Lys Ser Ser Ile  
 80 85 90  
 His Cys Met Asp Leu Ser Gln Arg Tyr Cys Leu Met Ala Val Phe  
 95 100 105  
 Asn Val Ile Tyr Leu Glu Asn Glu Asp Ser Glu  
 110 115

<210> 379  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 379  
 ctgcctccac tgctctgtgc tggg 24

<210> 380  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 380  
 cagagcagtg gatgttcccc tggg 24

<210> 381  
 <211> 45  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-45

<223> Synthetic construct.

<400> 381

ctgaacaaga tggcaagca agtgactggg aaaatgcccc tcttc 45

<210> 382

<211> 764

<212> DNA

<213> Homo sapiens

<400> 382

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 ggcgatgtgg aggggtgccc gcacaaccag acgcccagtc acaggcgaga 100  
 gccctgggat gcaccggcca gaggccatgc tgctgctgct cacgcttgcc 150  
 ctctgggggg gccccacctg ggcagggaag atgtatggcc ctggaggagg 200  
 caagtatttc agcaccactg aagactacga ccatgaaatc acagggctgc 250  
 ggggtgtctgt aggtcttctc ctgggtgaaaa gtgtccagggt gaaacttgga 300  
 gactcctggg acgtgaaact gggagcctta ggtgggaata cccaggaagt 350  
 caccctgcag ccaggcgaat acatcacaaa agtctttgtc gccttccaag 400  
 ctttctctcc gggatgggtc atgtacacca gcaaggaccg ctatttctat 450  
 tttgggaagc ttgatggcca gatctcctct gcctacccca gccaagaggg 500  
 gcagggtgctg gtgggcatct atggccagta tcaactcctt ggcatcaaga 550  
 gcattggctt tgaatggaat tatccactag aggagccgac cactgagcca 600  
 ccagttaatc tcacatactc agcaaactca cccgtgggtc gctaggggtg 650  
 ggtatggggc catccgagct gaggccatct gtgtggtggt ggctgatggt 700  
 actggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa 750  
 gcttctgcag aaaa 764

<210> 383

<211> 178

<212> PRT

<213> Homo sapiens

<400> 383

Met	His	Arg	Pro	Glu	Ala	Met	Leu	Leu	Leu	Leu	Thr	Leu	Ala	Leu
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Leu	Gly	Gly	Pro	Thr	Trp	Ala	Gly	Lys	Met	Tyr	Gly	Pro	Gly	Gly
				20				25					30	
Gly	Lys	Tyr	Phe	Ser	Thr	Thr	Glu	Asp	Tyr	Asp	His	Glu	Ile	Thr
				35				40					45	

Gly Leu Arg Val Ser Val Gly Leu Leu Leu Val Lys Ser Val Gln  
50 55 60

Val Lys Leu Gly Asp Ser Trp Asp Val Lys Leu Gly Ala Leu Gly  
65 70 75

Gly Asn Thr Gln Glu Val Thr Leu Gln Pro Gly Glu Tyr Ile Thr  
80 85 90

Lys Val Phe Val Ala Phe Gln Ala Phe Leu Arg Gly Met Val Met  
95 100 105

Tyr Thr Ser Lys Asp Arg Tyr Phe Tyr Phe Gly Lys Leu Asp Gly  
110 115 120

Gln Ile Ser Ser Ala Tyr Pro Ser Gln Glu Gly Gln Val Leu Val  
125 130 135

Gly Ile Tyr Gly Gln Tyr Gln Leu Leu Gly Ile Lys Ser Ile Gly  
140 145 150

Phe Glu Trp Asn Tyr Pro Leu Glu Glu Pro Thr Thr Glu Pro Pro  
155 160 165

Val Asn Leu Thr Tyr Ser Ala Asn Ser Pro Val Gly Arg  
170 175

<210> 384  
<211> 2379  
<212> DNA  
<213> Homo sapiens

<400> 384  
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atacagatgt ggcagctcag gtagcccaa attgcctgga agaatacatc 150  
atgtttttcg ataagaagaa attgtaggat ccagtttttt ttttaaccgc 200  
cccctcccca cccccaaaa aaactgtaaa gatgcaaaaa cgtaatatcc 250  
atgaagatcc tattacctag gaagattttg atgttttgct gcgaatgcgg 300  
tgttgggatt tatttgttct tggagtgttc tgcgtggctg gcaaagaata 350  
atgttccaaa atcgggtccat ctcccaaggg gtccaatttt tcttcctggg 400  
tgtcagcgag ccctgactca ctacagtgc gctgacagg gctgtcatgc 450  
aactggcccc taagccaaag caaaagacct aaggacgacc tttgaacaat 500  
acaaaggatg ggtttcaatg taattaggct actgagcgga tcagctgtag 550  
cactggttat agccccact gtcttactga caatgctttc ttctgccgaa 600  
cgaggatgcc ctaagggtg taggtgtgaa ggcaaatgg tatattgtga 650



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atctcagaaa ttacaggaga taccctcaag tatatctgct ggttgcttag 700
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aaagggctca accagctcac ctggctatac cttgaccata accatatcag 800
caatattgac gaaaatgctt ttaatggaat acgcagactc aaagagctga 850
ttcttagttc caatagaatc tcctattttc ttaacaatac cttcagacct 900
gtgacaaatt tacggaactt ggatctgtcc tataatcagc tgcattctct 950
gggatctgaa cagtttcggg gcttgcgga gctgctgagt ttacatttac 1000
ggtctaactc cctgagaacc atccctgtgc gaatattcca agactgccgc 1050
aacctggaac ttttggaact gggatataac cggatccgaa gtttagccag 1100
gaatgtcttt gctggcatga tcagactcaa agaacttcac ctggagcaca 1150
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cagaaccttt acttgcatg gaataaaatc agtgtcatag gacagaccat 1250
gtcctggacc tggagctcct tacaaaggct tgatttatca ggcaatgaga 1300
tcgaagcttt cagtggaccc agtgttttcc agtgtgtccc gaatctgcag 1350
cgcctcaacc tggattccaa caagctcaca tttattggtc aagagatttt 1400
ggattcttgg atatccctca atgacatcag tcttgctggg aatatatggg 1450
aatgcagcag aaatatattgc tcccttgtaa actggctgaa aagttttaaa 1500
ggtctaaggg agaatacaat tatctgtgcc agtcccaaag agctgcaagg 1550
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ctacagagag gtttgatctg gccagggtc tcccaaagcc gacgtttaag 1650
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aaagacagtc cctaaagcaa atgactccca gcaccagga attttatgta 1950
gattataaac ccaccaacac ggagaccagc gagatgctgc tgaatgggac 2000
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ccatttgtgat aaaaagagct cttaaaagct gggaaataag tggtgcttta 2100

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ttgaactctg gtgactatca agggaaacgcg atgccccccc tccccctccc 2150  
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tcataatact ggtcattttc ctctcataca taatcaaccc attgaaattt 2250  
aaataccaca atcaatgtga agcttgaact ccggtttaat ataataccta 2300  
ttgtataaga ccctttactg attccattaa tgtcgcattt gttttaagat 2350  
aaaacttctt tcataggtaa aaaaaaaaaa 2379

<210> 385  
<211> 513  
<212> PRT  
<213> Homo sapiens

<400> 385  
Met Gly Phe Asn Val Ile Arg Leu Leu Ser Gly Ser Ala Val Ala  
1 5 10 15  
Leu Val Ile Ala Pro Thr Val Leu Leu Thr Met Leu Ser Ser Ala  
20 25 30  
Glu Arg Gly Cys Pro Lys Gly Cys Arg Cys Glu Gly Lys Met Val  
35 40 45  
Tyr Cys Glu Ser Gln Lys Leu Gln Glu Ile Pro Ser Ser Ile Ser  
50 55 60  
Ala Gly Cys Leu Gly Leu Ser Leu Arg Tyr Asn Ser Leu Gln Lys  
65 70 75  
Leu Lys Tyr Asn Gln Phe Lys Gly Leu Asn Gln Leu Thr Trp Leu  
80 85 90  
Tyr Leu Asp His Asn His Ile Ser Asn Ile Asp Glu Asn Ala Phe  
95 100 105  
Asn Gly Ile Arg Arg Leu Lys Glu Leu Ile Leu Ser Ser Asn Arg  
110 115 120  
Ile Ser Tyr Phe Leu Asn Asn Thr Phe Arg Pro Val Thr Asn Leu  
125 130 135  
Arg Asn Leu Asp Leu Ser Tyr Asn Gln Leu His Ser Leu Gly Ser  
140 145 150  
Glu Gln Phe Arg Gly Leu Arg Lys Leu Leu Ser Leu His Leu Arg  
155 160 165  
Ser Asn Ser Leu Arg Thr Ile Pro Val Arg Ile Phe Gln Asp Cys  
170 175 180  
Arg Asn Leu Glu Leu Leu Asp Leu Gly Tyr Asn Arg Ile Arg Ser  
185 190 195  
Leu Ala Arg Asn Val Phe Ala Gly Met Ile Arg Leu Lys Glu Leu

				200						205					210
His	Leu	Glu	His	Asn 215	Gln	Phe	Ser	Lys	Leu 220	Asn	Leu	Ala	Leu	Phe 225	
Pro	Arg	Leu	Val	Ser 230	Leu	Gln	Asn	Leu	Tyr 235	Leu	Gln	Trp	Asn	Lys 240	
Ile	Ser	Val	Ile	Gly 245	Gln	Thr	Met	Ser	Trp 250	Thr	Trp	Ser	Ser	Leu 255	
Gln	Arg	Leu	Asp	Leu 260	Ser	Gly	Asn	Glu	Ile 265	Glu	Ala	Phe	Ser	Gly 270	
Pro	Ser	Val	Phe	Gln 275	Cys	Val	Pro	Asn	Leu 280	Gln	Arg	Leu	Asn	Leu 285	
Asp	Ser	Asn	Lys	Leu 290	Thr	Phe	Ile	Gly	Gln 295	Glu	Ile	Leu	Asp	Ser 300	
Trp	Ile	Ser	Leu	Asn 305	Asp	Ile	Ser	Leu	Ala 310	Gly	Asn	Ile	Trp	Glu 315	
Cys	Ser	Arg	Asn	Ile 320	Cys	Ser	Leu	Val	Asn 325	Trp	Leu	Lys	Ser	Phe 330	
Lys	Gly	Leu	Arg	Glu 335	Asn	Thr	Ile	Ile	Cys 340	Ala	Ser	Pro	Lys	Glu 345	
Leu	Gln	Gly	Val	Asn 350	Val	Ile	Asp	Ala	Val 355	Lys	Asn	Tyr	Ser	Ile 360	
Cys	Gly	Lys	Ser	Thr 365	Thr	Glu	Arg	Phe	Asp 370	Leu	Ala	Arg	Ala	Leu 375	
Pro	Lys	Pro	Thr	Phe 380	Lys	Pro	Lys	Leu	Pro 385	Arg	Pro	Lys	His	Glu 390	
Ser	Lys	Pro	Pro	Leu 395	Pro	Pro	Thr	Val	Gly 400	Ala	Thr	Glu	Pro	Gly 405	
Pro	Glu	Thr	Asp	Ala 410	Asp	Ala	Glu	His	Ile 415	Ser	Phe	His	Lys	Ile 420	
Ile	Ala	Gly	Ser	Val 425	Ala	Leu	Phe	Leu	Ser 430	Val	Leu	Val	Ile	Leu 435	
Leu	Val	Ile	Tyr	Val 440	Ser	Trp	Lys	Arg	Tyr 445	Pro	Ala	Ser	Met	Lys 450	
Gln	Leu	Gln	Gln	Arg 455	Ser	Leu	Met	Arg	Arg 460	His	Arg	Lys	Lys	Lys 465	
Arg	Gln	Ser	Leu	Lys 470	Gln	Met	Thr	Pro	Ser 475	Thr	Gln	Glu	Phe	Tyr 480	
Val	Asp	Tyr	Lys	Pro 485	Thr	Asn	Thr	Glu	Thr 490	Ser	Glu	Met	Leu	Leu 495	

365

Asn Gly Thr Gly Pro Cys Thr Tyr Asn Lys Ser Gly Ser Arg Glu  
500 505 510

Cys Glu Val

<210> 386  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 386  
ctgggatctg aacagtttcg gggc 24

<210> 387  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-24  
<223> Synthetic construct.

<400> 387  
ggtccccagg acatggtctg tccc 24

<210> 388  
<211> 48  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-48  
<223> Synthetic construct.

<400> 388  
gctgagttta catttacggt ctaactccct gagaaccatc cctgtgcg 48

<210> 389  
<211> 1449  
<212> DNA  
<213> Homo sapiens

<400> 389  
agttctgaga aagaaggaaa taaacacagg caccaaacca ctatcctaag 50  
ttgactgtcc tttaaatatg tcaagatcca gacttttcag tgtcacctca 100  
gcgatctcaa cgatagggat cttgtgtttg ccgctattcc agttgggtgct 150  
ctcggaccta ccatgcgaag aagatgaaat gtgtgtaaat tataatgacc 200

aacaccctaa tggctggtat atctggatcc tctgtctgct gggttttgggtg 250  
gcagctcttc tctgtggagc tgtggctcctc tgcctccagt gctggctgag 300  
gagaccccca attgattctc acaggcgcac catggcagtt tttgctgttg 350  
gagacttggg ctctatttat gggacagaag cagctgtgag tccaactgtt 400  
ggaattcacc ttcaaactca aaccctgac ctatatcctg ttctgtctcc 450  
atgttttggc ccttttaggt cccacactcc atatgaagaa attgtaaaaa 500  
caacctgatt ttaggtgtgg attatcaatt taaagtatta acgacatctg 550  
taattccaaa acatcaaatt taggaatagt tatttcagtt gttggaaatg 600  
tccagagatc tattcatata gtctgaggaa ggacaattcg acaaaagaat 650  
ggatgttggg aaaaattttg gtcattggaga tgtttaaata gttaaagtagc 700  
aggcttttga tgtgtcactg ctgtatcata cttttatgct acacaaccaa 750  
attaatgctt ctccactagt atccaaacag gcaacaatta ggtgctggaa 800  
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tctgctttta actctttcct agcatggggt ccataaaaaat tattataatt 900  
taacaatagc ccaagccgag aatccaacat gtccagaacc agaaccagaa 950  
agatagtatt tgaatgaagg tgaggggaga gagtaggaaa aagaaaagtt 1000  
tggagttgaa gggtaaagga taaatgaaga ggaaaaggaa aagattacaa 1050  
gtctcagcaa aaacaagagg ttttatgccc caacctgaag aggaagaaat 1100  
tgtagataga aggtgaagga gattgctgaa gatatagagc acatataatg 1150  
ccaacacggg gagaaaagaa aatttcccct ttacagtaa tgaatgtggc 1200  
ctccatagtc catagtgttt ctctggagcc tcagggcttg gcattttattg 1250  
cagcatcatg ctaagaacct tcggcatagg tatctgttcc catgaggact 1300  
gcagaagtag caatgagaca tcttcaagtg gcatttttggc agtggccatc 1350  
agcaggggga cagacaaaaa catccatcac agatgacata tgatcttcag 1400  
ctgacaaatt tgttgaacaa aacaataaac atcaatagat atctaaaaa 1449

<210> 390

<211> 146

<212> PRT

<213> Homo sapiens

<400> 390

Met	Ser	Arg	Ser	Arg	Leu	Phe	Ser	Val	Thr	Ser	Ala	Ile	Ser	Thr
1				5					10					15



<220>  
 <221> Artificial Sequence  
 <222> 1-47  
 <223> Synthetic construct.

<400> 393  
 ccagttggtg ctctcggacc taccatgcga agaagatgaa atgtgtg 47

<210> 394  
 <211> 2340  
 <212> DNA  
 <213> Homo sapiens

<400> 394  
 gagcggagta aaatctccac aagctgggaa caaacctcgt cccaactccc 50  
 acccaccggc gtttctccag ctgatctgg aggtgcttc gccagtgtgg 100  
 gacgcagctg acgcccgtt attagctctc gctgcgtcgc cccggctcag 150  
 aagctccgtg gcggcggcga ccgtgacgag aagcccacgg ccagctcagt 200  
 tctctttctac tttgggagag agagaaagtc agatgccctt tttaaactcc 250  
 ctcttcaaaa ctcatctcct gggtgactga gttaatagag tggatacaac 300  
 cttgctgaag atgaagaata tacaatattg aggatatttt tttctttttt 350  
 ttttcaagtc ttgatttgtg gcttacctca agttaccatt tttcagtcaa 400  
 gtctgtttgt ttgcttcttc agaaatgttt tttacaatct caagaaaaaa 450  
 tatgtcccag aaattgagtt tactgttgct tgtatttgga ctcatgtggg 500  
 gattgatgtt actgcactat acttttcaac aaccaagaca tcaaagcagt 550  
 gtcaagttac gtgagcaaat actagactta agcaaaagat atgttaaagc 600  
 tctagcagag gaaaataaga acacagtgga tgtcgagaac ggtgcttcta 650  
 tggcaggata tgcggatctg aaaagaacaa ttgctgtcct tctggatgac 700  
 attttgcaac gattggtgaa gctggagaac aaagttgact atattgttgt 750  
 gaatggctca gcagccaaca ccaccaatgg tactagtggg aatttggtgc 800  
 cagtaaccac aaataaaaga acgaatgtct cgggcagtat cagatagcag 850  
 ttgaaaatca ctttgtgctg ctccatccac tgtggattat atcctatggc 900  
 agaaaagctt tataattgct ggcttaggac agagcaatac tttacaataa 950  
 aagctctaca cattttcaag gagtatgctg gattcatgga actctaattc 1000  
 tgtacataaa aattttaaag ttatttgttt gctttcaggc aagtctgttc 1050  
 aatgctgtac tatgtcctta aagagaattt ggtaacttgg ttgatgtgg 1100

aagcagatag gtgagttttg tataaatctt ttgtgtttga gatcaagctg 1150  
aatgaaaac actgaaaaac atggattcat ttctataaca cttttattta 1200  
agtatataac acgttttttg gacaagtga gaatgtttta tcattctgtc 1250  
atttgttctc aatagatgta actgttagac tacggctatt tgaaaaaatg 1300  
tgcttattgt actatatttt gttattccaa ttatgagcag agaaaggaaa 1350  
tataatgttg aaaataatgt tttgaaatca tgacccaaag aatgtattga 1400  
tttgcactat ccttcagaat aactgaaggt taattattgt atatttttaa 1450  
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gtaaactcta atcttatact tattgaagaa taaaagatat ttttatgatg 1600  
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acctttatgt gaagaaatta atttatgcc attgccaggt 2340

<210> 395  
<211> 140  
<212> PRT  
<213> Homo sapiens

<400> 395  
Met Phe Phe Thr Ile Ser Arg Lys Asn Met Ser Gln Lys Leu Ser  
1 5 10 15



Leu Leu Leu Leu Val Phe Gly Leu Ile Trp Gly Leu Met Leu Leu  
20 25 30  
His Tyr Thr Phe Gln Gln Pro Arg His Gln Ser Ser Val Lys Leu  
35 40 45  
Arg Glu Gln Ile Leu Asp Leu Ser Lys Arg Tyr Val Lys Ala Leu  
50 55 60  
Ala Glu Glu Asn Lys Asn Thr Val Asp Val Glu Asn Gly Ala Ser  
65 70 75  
Met Ala Gly Tyr Ala Asp Leu Lys Arg Thr Ile Ala Val Leu Leu  
80 85 90  
Asp Asp Ile Leu Gln Arg Leu Val Lys Leu Glu Asn Lys Val Asp  
95 100 105  
Tyr Ile Val Val Asn Gly Ser Ala Ala Asn Thr Thr Asn Gly Thr  
110 115 120  
Ser Gly Asn Leu Val Pro Val Thr Thr Asn Lys Arg Thr Asn Val  
125 130 135  
Ser Gly Ser Ile Arg  
140

<210> 396  
<211> 2639  
<212> DNA  
<213> Homo sapiens

<400> 396  
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accttcggcc ttttcgacag cttcagcctg actcgggtgg attgtagcgg 200  
cctgggcccc cacatcatgc cggtgcccat ccctctggac acagcccact 250  
tggacctgtc ctccaaccgg ctggagatgg tgaatgagtc ggtgttggcg 300  
gggccgggct acacgacgtt ggctggcctg gatctcagcc acaacctgct 350  
caccagcacc tcacccactg ccttctcccc ccttcgctac ctggagtcgc 400  
ttgacctcag ccacaatggc ctgacagccc tgccagccga gagcttcacc 450  
agctcaccac tgagcgacgt gaaccttagc cacaaccagc tccgggaggt 500  
ctcagtgtct gccttcacga cgcacagtca gggccgggca ctacacgtgg 550  
acctctccca caacctcatt caccgcctcg tgccccaccc cacgagggcc 600  
ggcctgctg cgcccacat tcagagcctg aacctggcct ggaaccggct 650

ccatgccgtg cccaacctcc gagacttgcc cctgcgctac ctgagcctgg 700  
atgggaaccc tctagctgtc attggtccgg gtgccttcgc ggggctggga 750  
ggccttacac acctgtctct ggccagcctg cagaggctcc ctgagctggc 800  
gcccagtggc ttccgtgagc taccgggcct gcaggctcctg gacctgtcgg 850  
gcaaccccaa gcttaactgg gcaggagctg aggtgttttc aggcctgagc 900  
tccctgcagg agctggacct ttcgggcacc aacctggtgc ccctgcctga 950  
ggcgctgtc ctccacctcc cggcactgca gagcgtcagc gtgggccagg 1000  
atgtgcggtg ccggcgccctg gtgcgggagg gcacctaccc ccggaggcct 1050  
ggctccagcc ccaaggtgcc cctgcactgc gtagacaccc gggaatctgc 1100  
tgccaggggc cccaccatct tgtgacaaat ggtgtggccc agggccacat 1150  
aacagactgc tgtcctgggc tgctcaggt cccgagtaac ttatgttcaa 1200  
tgtgccaaac ccagtgggga gcccgcaggc ctatgtggca gcgtcaccac 1250  
aggagtgtg ggcctaggag aggcctttga cctgggagcc acacctagga 1300  
gcaaagtctc acccctttgt ctacgttgct tcccaaacc atgagcagag 1350  
ggacttcgat gccaaaccag actcgggtcc cctcctgctt cccttcccca 1400  
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cattagcaca ggagtagcag cagcaggaca ggcaagagcc tcacaagtgg 1900  
gactctgggc ctctgaccag ctgtgcggca tgggctaagt cactctgccc 1950  
ttcggagcct ctggaagctt agggcacatt ggttccagcc tagccagttt 2000  
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gagcctcatc tggctgggat ctccaagggg cctcctggat tcagtcccca 2150  
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ggagacaagg tctgcccagc ccatgtctat gctctacccc cagggcagca 2250  
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ttgttgctt tttaacggag tgtcactttc aaccggcctc ccctaccct 2350  
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tttgttcaact ttgtaatat tgtcctgggc ctgtgttggg gtgttggggg 2450  
aagctgggca tcagtggcca catgggcac aggggctggc cccacagaga 2500  
ccccacaggg cagtgaagtc tgtcttcccc cacctgccta gcccatcatc 2550  
tatctaaccg gtccttgatt taataaacac tataaaaggt ttaaaaaaaaa 2600  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2639

<210> 397  
<211> 353  
<212> PRT  
<213> Homo sapiens

<400> 397  
Met Pro Trp Pro Leu Leu Leu Leu Ala Val Ser Gly Ala Gln  
1 5 10 15  
Thr Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr  
20 25 30  
Phe Gly Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser  
35 40 45  
Gly Leu Gly Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr  
50 55 60  
Ala His Leu Asp Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu  
65 70 75  
Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp  
80 85 90  
Leu Ser His Asn Leu Leu Thr Ser Ile Ser Pro Thr Ala Phe Ser  
95 100 105  
Arg Leu Arg Tyr Leu Glu Ser Leu Asp Leu Ser His Asn Gly Leu  
110 115 120  
Thr Ala Leu Pro Ala Glu Ser Phe Thr Ser Ser Pro Leu Ser Asp  
125 130 135  
Val Asn Leu Ser His Asn Gln Leu Arg Glu Val Ser Val Ser Ala  
140 145 150

Phe Thr Thr His Ser Gln Gly Arg Ala Leu His Val Asp Leu Ser  
155 160 165  
His Asn Leu Ile His Arg Leu Val Pro His Pro Thr Arg Ala Gly  
170 175 180  
Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala Trp Asn Arg  
185 190 195  
Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg Tyr Leu  
200 205 210  
Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala Phe  
215 220 225  
Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln  
230 235 240  
Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly  
245 250 255  
Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala  
260 265 270  
Gly Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp  
275 280 285  
Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu Leu  
290 295 300  
His Leu Pro Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg  
305 310 315  
Cys Arg Arg Leu Val Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly  
320 325 330  
Ser Ser Pro Lys Val Pro Leu His Cys Val Asp Thr Arg Glu Ser  
335 340 345  
Ala Ala Arg Gly Pro Thr Ile Leu  
350

<210> 398  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-23  
<223> Synthetic construct.

<400> 398  
ccctgccagc cgagagcttc acc 23

<210> 399  
<211> 23  
<212> DNA



atgacatgcc attgtgggga ggaagcaatg aagaaataca gccagattct 800  
gagtcacttt gaaaagctgg aacctcaggc agcagttgtg aaggctttgg 850  
gggaactaga cattcttctg caatggatgg aggagacaga ataggaggaa 900  
agtgatgctg ctgctaagaa tattcgaggt caagagctcc agtcttcaat 950  
acctgcagag gaggcacatgac cccaaaccac catctcttta ctgtactagt 1000  
cttgtgctgg tcacagtgtg tcttatttat gcattacttg cttccttgca 1050  
tgattgtctt tatgcatccc caatcttaat tgagaccata cttgtataag 1100  
atTTTTgtaa tatctttctg ctattggata tatttattag ttaatatatt 1150  
tatttatttt ttgctattta atgtatttat ttttttactt ggacatgaaa 1200  
ctttaaaaaa attcacagat tatatttata acctgactag agcaggtgat 1250  
gtatttttat acagtaaaaa aaaaaaacct tgtaaattct agaagagtgg 1300  
ctaggggggt tattcatttg tattcaacta aggacatatt tactcatgct 1350  
gatgctctgt gagatatttg aaattgaacc aatgactact taggatgggt 1400  
tgtggaataa gttttgatgt ggaattgcac atctacctta caattactga 1450  
ccatccccag tagactcccc agtcccataa ttgtgtatct tccagccagg 1500  
aatcctacac ggccagcatg tatttctaca aataaagttt tctttgcata 1550  
ccaaaaaaaa aaaaaaaaaa a 1571

<210> 402  
<211> 261  
<212> PRT  
<213> Homo sapiens

<400> 402  
Met Arg Gln Phe Pro Lys Thr Ser Phe Asp Ile Ser Pro Glu Met  
1 5 10 15  
Ser Phe Ser Ile Tyr Ser Leu Gln Val Pro Ala Val Pro Gly Leu  
20 25 30  
Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys  
35 40 45  
Gly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu  
50 55 60  
Arg Pro Glu Ile Phe Ser Ser Arg Glu Ala Trp Gln Phe Phe Leu  
65 70 75  
Leu Leu Trp Ser Pro Asp Phe Arg Pro Lys Met Lys Ala Ser Ser  
80 85 90

Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr Leu Leu Trp Thr  
95 100 105  
Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile  
110 115 120  
Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Glu Ile Arg  
125 130 135  
Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile Leu  
140 145 150  
Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys  
155 160 165  
Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe  
170 175 180  
Lys Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser  
185 190 195  
Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu  
200 205 210  
Ser His Ala His Met Thr Cys His Cys Gly Glu Glu Ala Met Lys  
215 220 225  
Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu Glu Pro Gln  
230 235 240  
Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln  
245 250 255  
Trp Met Glu Glu Thr Glu  
260

<210> 403  
<211> 28  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-28  
<223> Synthetic construct.

<400> 403  
ctcctgtggt ctccagattt caggccta 28

<210> 404  
<211> 26  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-26  
<223> Synthetic construct.

<400> 404  
agtcctcctt aagattctga tgtcaa 26

<210> 405  
<211> 998  
<212> DNA  
<213> Homo sapiens

<400> 405  
ccgttatcgt cttgcgctac tgctgaatgt ccgtcccga ggaggaggag 50  
aggcttttgc cgctgaccca gagatggccc cgagcgagca aattcctact 100  
gtccggctgc gcggctaccg tggccgagct agcaaccttt cccctggatc 150  
tcacaaaaac tcgactccaa atgcaaggag aagcagctct tgctcggttg 200  
ggagacggtg caagagaatc tgccccctat aggggaatgg tgcgcacagc 250  
cctagggatc attgaagagg aaggctttct aaagctttgg caaggagtga 300  
caccgccat ttacagacac gtagtgtatt ctggaggctg aatggtcaca 350  
tatgaacatc tccgagaggt tgtgtttggc aaaagtgaag atgagcatta 400  
tccccttttg aaatcagtca ttggagggat gatggctggg gttattggcc 450  
agtttttagc caatccaact gacctagtga aggttcagat gcaaattgaa 500  
ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca 550  
tgcatttgca aaaatcttag ctgaaggagg aatacgaggg ctttgggcag 600  
gctgggtacc caatatacaa agagcagcac tgggtgaatat gggagattta 650  
accacttatg atacagtga acactacttg gtattgaata caccacttga 700  
ggacaatatc atgactcacg gtttatcaag tttatgttct ggactggtag 750  
cttctattct gggaacacca gccgatgtca tcaaaagcag aataatgaat 800  
caaccacgag ataaacaagg aaggggactt ttgtataaat catcgactga 850  
ctgcttgatt caggctgttc aaggtgaagg attcatgagt ctatataaag 900  
gctttttacc atcttggtg agaatgacc cttggtcaat ggtgttcttg 950  
cttacttatg aaaaaatcag agagatgagt ggagtcagtc cattttaa 998

<210> 406  
<211> 323  
<212> PRT  
<213> Homo sapiens

<400> 406  
Met Ser Val Pro Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln  
1 5 10 15



Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala  
20 25 30

Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr  
35 40 45

Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp  
50 55 60

Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala  
65 70 75

Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly  
80 85 90

Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg  
95 100 105

Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser  
110 115 120

Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met  
125 130 135

Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu  
140 145 150

Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly  
155 160 165

Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile  
170 175 180

Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro  
185 190 195

Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr  
200 205 210

Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu  
215 220 225

Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu  
230 235 240

Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg  
245 250 255

Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr  
260 265 270

Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly  
275 280 285

Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met  
290 295 300

Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg

305

310

315

Glu Met Ser Gly Val Ser Pro Phe  
320

<210> 407  
<211> 31  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-31  
<223> Synthetic construct.

<400> 407  
cgcggaatccc gttatcgtct tgcgctactg c 31

<210> 408  
<211> 34  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-34  
<223> Synthetic construct.

<400> 408  
gcggaattct taaaatggac tgactccact catc 34

<210> 409  
<211> 1487  
<212> DNA  
<213> Homo sapiens

<400> 409  
cggacgcgtg ggcgcgggac gccggcaggg ttgtggcgca gcagtctcct 50  
tcctgcgcgc gcgcctgaag tcggcggtggg cgtttgagga agctgggata 100  
cagcatttaa tgaaaaattt atgcttaaga agtaaaaatg gcaggcttcc 150  
tagataattt tcgttgacca gaatgtgaat gtattgactg gagtgagaga 200  
agaaatgctg tggcatctgt tgtcgcaggt atattgtttt ttacaggctg 250  
gtggataatg attgatgcag ctgtgggtgta tcctaagcca gaacagttga 300  
accatgcctt tcacacatgt ggtgtatttt ccacattggc tttcttcatg 350  
ataaatgctg tatccaatgc tcaggtgaga ggtgatagct atgaaagcgg 400  
ctgttttagga agaacagggtg ctcgagtttg gcttttcatt ggtttcatgt 450  
tgatgttttg gtcacttatt gcttccatgt ggattctttt tgggtgcatat 500  
gttacccaaa atactgatgt ttatccggga ctagctgtgt tttttcaaaa 550

380

tgcacttata	tttttttagca	ctctgatcta	caaatttgga	agaaccgaag	600
agctatggac	ctgagatcac	ttcttaagtc	acatttttct	tttgttatat	650
tctgtttgta	gataggtttt	ttatctctca	gtacacattg	ccaaatggag	700
tagattgtac	attaaatggt	ttgtttcttt	acattttttat	gttctgaggt	750
ttgaaatagt	tttatgaaat	ttctttattt	ttcattgcat	agactgttaa	800
tatgtatata	atacaagact	atatgaattg	gataatgagt	atcagttttt	850
tattcctgag	atttagaact	tgatctactc	cctgagccag	ggttacatca	900
tcttgtcatt	ttagaagtaa	ccactcttgt	ctctctggct	gggcacggtg	950
gctcatgcct	gtaatcccag	cactttggga	ggccgaggcg	ggccgattgc	1000
ttgagggtcaa	gtgtttgaga	ccagcctggc	caacatggcg	aaaccccatc	1050
tactaaaaat	acaaaaatta	gccaggcatg	gtgggtgggtg	cctgtaatcc	1100
cagctacctg	ggaggctgag	gcaggagaat	cgcttgaacc	cgggggggcag	1150
aggttgcagt	gagctgagtt	tgcgccactg	cactctagcc	tggggggagaa	1200
agtgaaactc	cctctcaaaa	aaaagaccac	tctcagtatc	tctgattttct	1250
gaagatgtac	aaaaaaaatat	agcttcatat	atctggaatg	agcactgagc	1300
cataaaaggt	tttcagcaag	ttgtaactta	ttttggccta	aaaatgaggt	1350
tttttttggt	aagaaaaaat	atttgttctt	atgtattgaa	gaagtgtact	1400
tttatataat	gatttttttaa	atgcccaaag	gactagtttg	aaagcttctt	1450
ttaaaaagaa	ttcctctaata	atgactttat	gtgagaa	1487	

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<210> 410
<211> 158
<212> PRT
<213> Homo sapiens
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<400> 410														
Met	Ala	Gly	Phe	Leu	Asp	Asn	Phe	Arg	Trp	Pro	Glu	Cys	Glu	Cys
1				5					10					15
Ile	Asp	Trp	Ser	Glu	Arg	Arg	Asn	Ala	Val	Ala	Ser	Val	Val	Ala
				20					25					30
Gly	Ile	Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Met	Ile	Asp	Ala	Ala
				35					40					45
Val	Val	Tyr	Pro	Lys	Pro	Glu	Gln	Leu	Asn	His	Ala	Phe	His	Thr
				50					55					60
Cys	Gly	Val	Phe	Ser	Thr	Leu	Ala	Phe	Phe	Met	Ile	Asn	Ala	Val
				65					70					75

Ser Asn Ala Gln Val Arg Gly Asp Ser Tyr Glu Ser Gly Cys Leu  
80 85 90  
Gly Arg Thr Gly Ala Arg Val Trp Leu Phe Ile Gly Phe Met Leu  
95 100 105  
Met Phe Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Ala  
110 115 120  
Tyr Val Thr Gln Asn Thr Asp Val Tyr Pro Gly Leu Ala Val Phe  
125 130 135  
Phe Gln Asn Ala Leu Ile Phe Phe Ser Thr Leu Ile Tyr Lys Phe  
140 145 150  
Gly Arg Thr Glu Glu Leu Trp Thr  
155

<210> 411  
<211> 20  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-20  
<223> Synthetic construct.

<400> 411  
gtttgaggaa gctgggatac 20

<210> 412  
<211> 20  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-20  
<223> Synthetic construct.

<400> 412  
ccaaactcga gcacctgttc 20

<210> 413  
<211> 40  
<212> DNA  
<213> Artificial

<220>  
<221> Artificial Sequence  
<222> 1-40  
<223> Synthetic construct.

<400> 413  
atggcaggct tcttagataa ttttcgttgg ccagaatgtg 40

<210> 414

<211> 1337  
 <212> DNA  
 <213> Homo sapiens

<400> 414  
 gttgatggca aacttcctca aaggaggggc agagcctgcg cagggcagga 50  
 gcagctggcc cactggcggc ccgcaacact ccgtctcacc ctctggggccc 100  
 actgcatcta gaggaggggc gtctgtgagg ccactacccc tccagcaact 150  
 gggaggtggg actgtcagaa gctggcccag ggtggtggtc agctgggtca 200  
 gggacctacg gcacctgctg gaccacctcg ccttctccat cgaagcaggg 250  
 aagtgggagc ctcgagccct cgggtggaag ctgaccccaa gccacccttc 300  
 acctggacag gatgagagtg tcaggtgtgc ttgcctcctt ggccctcatc 350  
 tttgccatag tcacgacatg gatgtttatt cgaagctaca tgagcttcag 400  
 catgaaaacc atccgtctgc cacgctggct ggagcctcg cccaccaagg 450  
 agatccaggt taaaaagta aagtgtggcc tcatcaagcc ctgcccagcc 500  
 aactactttg cgtttaaaat ctgcagtggg gccgccaacg tcgtggggccc 550  
 tactatgtgc tttgaagacc gcatgatcat gagtccgtgtg aaaaacaatg 600  
 tgggcagagg cctaaacatc gccctggtga atggaaccac gggagctgtg 650  
 ctgggacaga aggcatttga catgtactct ggagatgtta tgcacctagt 700  
 gaaattcctt aaagaaattc cgggggggtgc actggtgctg gtggcctcct 750  
 acgacgatcc agggaccaa atgaacgatg aaagcaggaa actcttctct 800  
 gacttgggga gttcctacgc aaaacaactg ggcttccggg acagctgggt 850  
 cttcatagga gccaaagacc tcaggggtaa aagccccttt gagcagttct 900  
 taaagaacag cccagacaca aacaatacag agggatggcc agagctgctg 950  
 gagatggagg gctgcatgcc cccgaagcca ttttaggtg gctgtggctc 1000  
 ttctcagcc aggggcctga agaagctcct gcctgactta ggagtcagag 1050  
 cccggcaggg gctgaggagg aggagcaggg ggtgctgctg ggaaggtgct 1100  
 gcaggtcctt gcacgtgtg tcgcgcctct cctcctcgga aacagaaccc 1150  
 tcccacagca catcctaccc ggaagaccag cctcagaggg tccttctgga 1200  
 accagctgtc tgtggagaga atggggtgct ttctcaggg actgctgacg 1250  
 gctggtcctg aggaaggaca aactgccag acttgagccc aattaaattt 1300  
 tatttttgct ggttttgaaa aaaaaaaaaa aaaaaaa 1337

<210> 415  
 <211> 224  
 <212> PRT  
 <213> Homo sapiens

<400> 415  
 Met Arg Val Ser Gly Val Leu Arg Leu Leu Ala Leu Ile Phe Ala  
 1 5 10 15  
 Ile Val Thr Thr Trp Met Phe Ile Arg Ser Tyr Met Ser Phe Ser  
 20 25 30  
 Met Lys Thr Ile Arg Leu Pro Arg Trp Leu Ala Ala Ser Pro Thr  
 35 40 45  
 Lys Glu Ile Gln Val Lys Lys Tyr Lys Cys Gly Leu Ile Lys Pro  
 50 55 60  
 Cys Pro Ala Asn Tyr Phe Ala Phe Lys Ile Cys Ser Gly Ala Ala  
 65 70 75  
 Asn Val Val Gly Pro Thr Met Cys Phe Glu Asp Arg Met Ile Met  
 80 85 90  
 Ser Pro Val Lys Asn Asn Val Gly Arg Gly Leu Asn Ile Ala Leu  
 95 100 105  
 Val Asn Gly Thr Thr Gly Ala Val Leu Gly Gln Lys Ala Phe Asp  
 110 115 120  
 Met Tyr Ser Gly Asp Val Met His Leu Val Lys Phe Leu Lys Glu  
 125 130 135  
 Ile Pro Gly Gly Ala Leu Val Leu Val Ala Ser Tyr Asp Asp Pro  
 140 145 150  
 Gly Thr Lys Met Asn Asp Glu Ser Arg Lys Leu Phe Ser Asp Leu  
 155 160 165  
 Gly Ser Ser Tyr Ala Lys Gln Leu Gly Phe Arg Asp Ser Trp Val  
 170 175 180  
 Phe Ile Gly Ala Lys Asp Leu Arg Gly Lys Ser Pro Phe Glu Gln  
 185 190 195  
 Phe Leu Lys Asn Ser Pro Asp Thr Asn Lys Tyr Glu Gly Trp Pro  
 200 205 210  
 Glu Leu Leu Glu Met Glu Gly Cys Met Pro Pro Lys Pro Phe  
 215 220

<210> 416  
 <211> 21  
 <212> DNA  
 <213> Artificial  
  
 <220>  
 <221> Artificial Sequence







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 cgctacaatg gctcgtcac aactccccct tgctaccaga gtgtgctctg 950  
 gacagttttt tatagaaggt cccagatttc aatggaacag ctggaaaagc 1000  
 ttcaggggac attgttctcc acagaagagg agccctctaa gcttctggta 1050  
 cagaactacc gagcccttca gcctctcaat cagcgcatgg tctttgcttc 1100  
 tttcatccaa gcaggatcct cgtataccac aggtgaaatg ctgagtctag 1150  
 gtgtaggaat cttgggtggc tgtctctgcc ttctctggc tgtttatttc 1200  
 attgctagaa agattcggaa gaagaggctg gaaaaccgaa agagtgtggt 1250  
 cttcacctca gcacaagcca cgactgaggc ataaattcct tctcagatac 1300  
 catggatgtg gatgacttcc cttcatgcct atcaggaagc ctctaaaatg 1350  
 ggggtgtagga tctggccaga aacactgtag gagtagtaag cagatgtcct 1400  
 ccttccccctg gacatctctt agagaggaat ggaccaggc tgtcattcca 1450  
 ggaagaactg cagagccttc agcctctcca aacatgtagg aggaaatgag 1500  
 gaaatcgctg tgttggttaat gcagaganca aactctgttt agttgcaggg 1550  
 gaagtttggg atatacccca aagtcctcta cccctcact tttatggccc 1600  
 tttccctaga tatactgcgg gatctctcct taggataaag agttgctgtt 1650  
 gaagttgtat atttttgatc aatatatttg gaaattaaag tttctgactt 1700  
 t 1701

<210> 423  
 <211> 337  
 <212> PRT  
 <213> Homo sapiens

<400> 423  
 Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala  
 1 5 10 15  
 Ala Asp Gly Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln  
 20 25 30  
 Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln  
 35 40 45  
 Ser Pro Ile Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp  
 50 55 60  
 Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu  
 65 70 75  
 Pro Leu Asp Leu His Asn Asn Gly His Thr Val Gln Leu Ser Leu

80										85					90				
Pro	Ser	Thr	Leu	Tyr 95	Leu	Gly	Gly	Leu	Pro 100	Arg	Lys	Tyr	Val	Ala 105					
Ala	Gln	Leu	His	Leu 110	His	Trp	Gly	Gln	Lys 115	Gly	Ser	Pro	Gly	Gly 120					
Ser	Glu	His	Gln	Ile 125	Asn	Ser	Glu	Ala	Thr 130	Phe	Ala	Glu	Leu	His 135					
Ile	Val	His	Tyr	Asp 140	Ser	Asp	Ser	Tyr	Asp 145	Ser	Leu	Ser	Glu	Ala 150					
Ala	Glu	Arg	Pro	Gln 155	Gly	Leu	Ala	Val	Leu 160	Gly	Ile	Leu	Ile	Glu 165					
Val	Gly	Glu	Thr	Lys 170	Asn	Ile	Ala	Tyr	Glu 175	His	Ile	Leu	Ser	His 180					
Leu	His	Glu	Val	Arg 185	His	Lys	Asp	Gln	Lys 190	Thr	Ser	Val	Pro	Pro 195					
Phe	Asn	Leu	Arg	Glu 200	Leu	Leu	Pro	Lys	Gln 205	Leu	Gly	Gln	Tyr	Phe 210					
Arg	Tyr	Asn	Gly	Ser 215	Leu	Thr	Thr	Pro	Pro 220	Cys	Tyr	Gln	Ser	Val 225					
Leu	Trp	Thr	Val	Phe 230	Tyr	Arg	Arg	Ser	Gln 235	Ile	Ser	Met	Glu	Gln 240					
Leu	Glu	Lys	Leu	Gln 245	Gly	Thr	Leu	Phe	Ser 250	Thr	Glu	Glu	Glu	Pro 255					
Ser	Lys	Leu	Leu	Val 260	Gln	Asn	Tyr	Arg	Ala 265	Leu	Gln	Pro	Leu	Asn 270					
Gln	Arg	Met	Val	Phe 275	Ala	Ser	Phe	Ile	Gln 280	Ala	Gly	Ser	Ser	Tyr 285					
Thr	Thr	Gly	Glu	Met 290	Leu	Ser	Leu	Gly	Val 295	Gly	Ile	Leu	Val	Gly 300					
Cys	Leu	Cys	Leu	Leu 305	Leu	Ala	Val	Tyr	Phe 310	Ile	Ala	Arg	Lys	Ile 315					
Arg	Lys	Lys	Arg	Leu 320	Glu	Asn	Arg	Lys	Ser 325	Val	Val	Phe	Thr	Ser 330					
Ala	Gln	Ala	Thr	Thr 335	Glu	Ala													

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<210> 424
<211> 18
<212> DNA
<213> Artificial
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<220>  
 <221> Artificial Sequence  
 <222> 1-18  
 <223> Synthetic construct.

<400> 424  
 gtaaagtcgc tggccagc 18

<210> 425  
 <211> 18  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-18  
 <223> Synthetic construct.

<400> 425  
 cccgatctgc ctgctgta 18

<210> 426  
 <211> 24  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-24  
 <223> Synthetic construct.

<400> 426  
 ctgcactgta tggccattat tgtg 24

<210> 427  
 <211> 45  
 <212> DNA  
 <213> Artificial

<220>  
 <221> Artificial Sequence  
 <222> 1-45  
 <223> Synthetic construct.

<400> 427  
 cagaaaccca tgatacccta ctgaacaccg aatcccctgg aagcc 45

<210> 428  
 <211> 1073  
 <212> DNA  
 <213> Homo sapiens

<400> 428  
 aattttttcac cagagtaaac ttgagaaacc aactggacct tgagtattgt 50  
 acatttttgcc tcgtggaccc aaaggtagca atctgaaaca tgaggagtac 100  
 gattctactg ttttgtcttc taggatcaac tcggtcatta ccacagctca 150

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aacctgcttt gggactccct cccacaaaac tggctccgga tcagggaaca 200
ctaccaaacc aacagcagtc aaatcaggtc tttccttctt taagtctgat 250
accattaaca cagatgctca cactggggcc agatctgcat ctgttaaata 300
ctgctgcagg aatgacacct ggtacccaga cccacccatt gaccctggga 350
gggttgaatg tacaacagca actgcacca catgtgttac caatttttgt 400
cacacaactt ggagcccagg gcactatcct aagctcagag gaattgccac 450
aaatcttcac gagcctcatc atccattcct tgttcccggg aggcacacct 500
cccaccagtc aggcaggggc taatccagat gtccaggatg gaagccttcc 550
agcaggagga gcaggtgtaa atcctgccac ccagggaacc ccagcaggcc 600
gcctcccaac tcccagtggc acagatgacg actttgcagt gaccacccct 650
gcaggcatcc aaaggagcac acatgccatc gaggaagcca ccacagaata 700
agcaaatgga attcagtaag ctgtttcaaa ttttttcaac taagctgcct 750
cgaatttggt gatacatgtg aatctttatc attgattata ttatggaata 800
gattgagaca cattggatag tcttagaaga aattaattct taatttacct 850
gaaaatattc ttgaaatttc agaaaatatg ttctatgtag agaatcccaa 900
cttttaaaaa caataattca atggataaat ctgtctttga aatataacat 950
tatgctgcct ggatgatatg catattaaaa catatttgga aaactggaaa 1000
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1050
aaaaaaaaaa aaaaaaaaaa aaa 1073

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<210> 429  
 <211> 209  
 <212> PRT  
 <213> Homo sapiens

<400> 429  
 Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg  
 1 5 10 15  
 Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys  
 20 25 30  
 Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn  
 35 40 45  
 Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu  
 50 55 60  
 Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met  
 65 70 75

Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn  
80 85 90  
Val Gln Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr  
95 100 105  
Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro  
110 115 120  
Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly  
125 130 135  
Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp  
140 145 150  
Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Asn Pro Ala Thr Gln  
155 160 165  
Gly Thr Pro Ala Gly Arg Leu Pro Thr Pro Ser Gly Thr Asp Asp  
170 175 180  
Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His  
185 190 195  
Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln  
200 205

<210> 430  
<211> 1257  
<212> DNA  
<213> Homo Sapien

<400> 430  
ggagagaggc gcgcgggtga aaggcgcatc gatgcagcct gcggcggcct 50  
cggagcgcgg cggagccaga cgctgaccac gttcctctcc tcggtctcct 100  
ccgcctccag ctccgcgctg cccggcagcc gggagccatg cgaccccagg 150  
gccccgccgc ctccccgcag cggctccgcg gcctcctgct gctcctgctg 200  
ctgcagctgc ccgcgccgtc gagcgctctc gagatcccca aggggaagca 250  
aaaggcgagc ctccggcaga gggaggtggt ggacctgtat aatggaatgt 300  
gcttacaagg gccagcagga gtgcctggtc gagacgggag ccctggggcc 350  
aatgttattc cgggtacacc tgggatccca ggtcgggatg gattcaaagg 400  
agaaaagggg gaatgtctga gggaaagctt tgaggagtcc tggacaccca 450  
actacaagca gtgttcattg agttcattga attatggcat agatcttggg 500  
aaaattgcgg agtgtacatt tacaaagatg cgttcaaata gtgctctaag 550  
agttttgttc agtggctcac ttcggctaaa atgcagaaat gcatgctgtc 600  
agcgttggtg tttcacattc aatggagctg aatgttcagg acctcttccc 650

attgaagcta taattttattt ggaccaagga agccctgaaa tgaattcaac 700  
aattaatatt catcgcaactt cttctgtgga aggactttgt gaaggaattg 750  
gtgctggatt agtggatggt gctatctggg ttggcacttg ttcagattac 800  
ccaaaaggag atgcttctac tggatggaat tcagtttctc gcatcattat 850  
tgaagaacta ccaaaataaa tgctttaatt ttcatttgct acctcttttt 900  
ttattatgcc ttggaatggt tcacttaaata gacattttta ataagtttat 950  
gtatacatct gaatgaaaag caaagctaaa tatgtttaca gaccaaagtg 1000  
tgatttcaca ctgtttttta atctagcatt attcattttg cttcaatcaa 1050  
aagtggtttc aatatttttt ttagttgggt agaatacttt cttcatagtc 1100  
acattctctc aacctataat ttggaatatt gttgtggtct tttgtttttt 1150  
ctcttagtat agcattttta aaaaaatata aaagctacca atctttgtac 1200  
aatttgtaaa tgtaagaat tttttttata tctgttaaata aaaaattatt 1250  
tccaaca 1257

<210> 431  
<211> 243  
<212> PRT  
<213> Homo Sapien

<400> 431  
Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly  
1 5 10 15  
Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala  
20 25 30  
Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg  
35 40 45  
Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala  
50 55 60  
Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro  
65 70 75  
Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys  
80 85 90  
Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn  
95 100 105  
Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu  
110 115 120  
Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser  
125 130 135

Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg  
140 145 150  
Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu  
155 160 165  
Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln  
170 175 180  
Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser  
185 190 195  
Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp  
200 205 210  
Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp  
215 220 225  
Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu  
230 235 240

Leu Pro Lys

<210> 432  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Artificial Sequence

<400> 432  
aggacttgcc ctcaggaa 18

<210> 433  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 433  
cgcaggacag ttgtgaaaat a 21

<210> 434  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 434  
atgacgctcg tccaaggcca c 21

<210> 435

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<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 435
    cccacctgta ccaccatgt 19

<210> 436
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 436
    actccaggca ccatctgttc tccc 24

<210> 437
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 437
    aagggctggc attcaagtc 19

<210> 438
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 438
    tgacctggca aaggaagaa 19

<210> 439
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 439
    cagccaccct ccagtccaag g 21

<210> 440
<211> 19
<212> DNA
<213> Artificial Sequence

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<220>  
 <223> Synthetic oligonucleotide probe  
 <400> 440  
 gggtcgtgtt ttggagaga 19  
 <210> 441  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 441  
 ctggccctca gagcaccaat 20  
 <210> 442  
 <211> 25  
 <212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 442  
 tcctccatca cttcccctag ctcca 25  
 <210> 443  
 <211> 24  
 <212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe  
 <400> 443  
 ctggcaggag ttaaagttcc aaga 24  
 <210> 444  
 <211> 18  
 <212> DNA  
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 <223> Synthetic oligonucleotide probe  
 <400> 444  
 aaaggacacc gggatgtg 18  
 <210> 445  
 <211> 26  
 <212> DNA  
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 <220>  
 <223> Synthetic oligonucleotide probe

<400> 445  
 agcgtacact ctctccaggc aaccag 26  
  
 <210> 446  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 446  
 caattctgga tgaggtggta ga 22  
  
 <210> 447  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 447  
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 <210> 448  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 448  
 caaagcgcca agtaccggac c 21  
  
 <210> 449  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 449  
 ccagacctca gccaggaa 18  
  
 <210> 450  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 450  
 ccctagctga ccccttca 18



<213> Artificial Sequence  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 456  
ccttgaaaag gacccagttt 20  
<210> 457  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 457  
atgagtcgca cctgctgttc cc 22  
<210> 458  
<211> 18  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 458  
tagcagctgc ccttggtta 18  
<210> 459  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 459  
aacagcaggt gcgactcatc ta 22  
<210> 460  
<211> 23  
<212> DNA  
<213> Artificial Sequence  
<220>  
<223> Synthetic oligonucleotide probe  
<400> 460  
tgctaggcga cgacacccag acc 23  
<210> 461  
<211> 18  
<212> DNA  
<213> Artificial Sequence  
<220>

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tggacacgtg gcagtgga 18

<211> 19

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

tcattggtctc gtcccatc 19

<211> 27

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

caccatttgt ttctctgtct ccccatc 27

<211> 18

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

ccggcatcct tggagtag 18

<211> 20

<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

tccccattag cacaggagta 20

<211> 23

### <213> Artificial Sequence

<223> Synthetic oligonucleotide probe

399



<211> 24  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 472  
tcagggtcta catcagcctc ctgc 24  
  
<210> 473  
<211> 19  
<212> DNA  
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